



U.S. Environmental Protection Agency  
Region 8  
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 08/10/15

Subject: Analytical Results--- **Upper Animas\_Surface Water 2\_AUG 2015\_A096**

From: Don Goodrich; EPA Region8 Analytical Chemistry WAM

To: <ClientManager>  
Superfund  
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:  
[ C150802 : 08/09/2015 ]

Attached are the analytical results for the samples received from the Upper Animas Surface Water 2\_AUG 2015\_A096 sampling event, according to TDF [none]. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality assessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the USEPA *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004, referred to as "NFGI".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

TDF #: [none]

**Case Narrative****C150802**

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

1. Initial and Continuing calibration blanks (ICBs and CCBs).  
Exceptions: None.
2. Preparation (PB) / Method blanks (MB)  
Exceptions: None.
3. Interference Checks (ICSA / ICSAB) for ICP-MS and ICP-OE analyses only.  
Exceptions: None.
4. Initial and Continuing calibration verification analyses (ICVs, SCVs and CCVs).  
Exceptions: None.
5. Laboratory Control Sample (LCS) or second source analysis or SRM.  
Exceptions: None.
6. Laboratory Fortified blank (LFB) / Blank spike (BS), same source as used for the matrix spikes.  
PBS performed with analyses/methods requiring preparation or digestion prior to analysis.  
Exceptions: None.
7. Contract Reporting Detection Limit Standard, labeled as CRA, CRDL or CRL.  
Exceptions: In ICP-MS sequence 1508051, cadmium recovered low in the CRL. As a result, associated samples were qualified "J" as estimated for cadmium.
8. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. If either the "source" or the duplicate result is <5X the reporting limit, the %D limit of 20% does not apply.  
Exceptions: In ICP-MS batch 1508043, lead recovered high in the DUP. As a result, the source sample was qualified "J" as estimated for lead.
9. Laboratory Matrix Spike (MS) and spike duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.  
Exceptions: In mercury batch 1508045, MS1 recovery was low, as a result, associated sample was "J" flagged as estimated.
10. Serial Dilution sample analysis (SRD). "Source" is parent field sample diluted 1:5 in the laboratory. Performed for ICP-OE and ICP-MS metals analyses. Percent difference (%D) limits do not apply when analyte concentration(s) are below 50x the source sample's MDL (or 10x it's PQL).  
Exceptions: None.
11. Internal standards, criteria specified for ICP-MS analyses only, monitored at the instrument.  
Exceptions: None.
12. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995.  
Exceptions: None.

TDF #: [none]

## Acronyms and Definitions:

|      |   |
|------|---|
| ESAT | Environmental Services Assistance Team  |
| J    | Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)                         |
| MDL  | Method Detection Limit  |
| PQL  | Practical Quantitation Limit, also known as reporting limit.  |
| RPD  | Relative Percent Difference (difference divided by the mean)  |
| %D   | Percent difference, serial dilution criteria unit, difference divided by the original result                            |
| %R   | Percent recovery, analyzed (less sample contribution) divided by true value   |
| <    | Analyte NOT DETECTED at or above the Method Detection Limit(MDL)  |
| mg/L | Parts per million (milligrams per liter). Solids equivalent = mg/Kg.  |
| ug/L | Parts per billion (micrograms per liter). Solids equivalent = ug/Kg.  |
| NR   | No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x. |
| NFGI | USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review/October 2004                 |
| RE   | Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.    |
| U    | Analyte not detected at or above MDL qualifier  |
| D    | Diluted value qualifier.  |

## Method(s) Summary :

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP -OE (ICP).
- Method 200.8 / 6020 using a Perkin -Elmer Elan 6000 ICP -MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin -Elmer FIMS CV AA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18<sup>th</sup> Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent CaCO<sub>3</sub> per liter (L) determined as follows:

$$\text{Calculated hardness} = 2.497 * (\text{Calcium, mg/L}) + 4.118 * (\text{Magnesium, mg/L}).$$

From EPA's *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-0000

Date / Time Sampled: 08/07/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-02 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | < 50.0  | U         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 61100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7820    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 464     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 1990    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 10200   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 53.8    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 22.1    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 0.490   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 1.27    | J         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 0.994   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 3.87    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | 0.289   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 185     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-0030

Date / Time Sampled: 08/07/15 00:30

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-05 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | < 50.0  | U         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 62700   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7930    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 676     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 2020    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 10100   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 84.8    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 25.1    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 0.699   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 1.66    |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 4.32    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | 0.230   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 189     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-1000

Date / Time Sampled: 08/07/15 10:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-08 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 20.6    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 52100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7140    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 131     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 1830    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 9920    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 24.0    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 46.0    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 0.190   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 1.77    | J         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 0.276   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 3.58    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | 0.824   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 159     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-2005

Date / Time Sampled: 08/06/15 20:05

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-11 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 59.4    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 51200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7020    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 75.3    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 1830    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 10200   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 57.0    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | 0.643   | J         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 50.6    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 0.139   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 2.12    |           | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 0.261   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 4.09    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | 3.26    |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 157     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-2108

Date / Time Sampled: 08/06/15 21:08

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-14 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 61.1    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 51700   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7090    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 77.2    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 1880    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 10300   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 61.4    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 47.6    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 0.134   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 2.31    |           | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 0.364   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 2.55    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | 0.209   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 158     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-2200

Date / Time Sampled: 08/06/15 22:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-17 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 47.5    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 52200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7140    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 81.0    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 1900    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 10400   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 47.0    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 47.7    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | < 0.200 | J,        | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 1.98    | J         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 0.295   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 3.50    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | 0.161   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 160     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-2300

Date / Time Sampled: 08/06/15 23:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-20 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | < 50.0  | U         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 54800   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7390    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 158     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 1900    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 10400   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 21.6    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 34.2    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 0.105   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 1.93    | J         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 0.366   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 3.68    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | 0.119   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 167     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW01-080815

Date / Time Sampled: 08/08/15 10:05

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-23 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 42.7    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 53300   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7500    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 102     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 1870    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 10500   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 22.8    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 41.4    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | < 0.200 | J,        | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 1.55    | J         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 0.653   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 1.73    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 164     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW01-080915

Date / Time Sampled: 08/09/15 12:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-26 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 75.6    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 50700   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 7270    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 81.8    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 1770    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 9760    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | < 20.0  | U         | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | 0.512   | J         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 39.4    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | < 0.200 | J,        | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 3.62    |           | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 0.872   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 2.09    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 156     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW02-080815

Date / Time Sampled: 08/08/15 12:30

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-29 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 46.3    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 35100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 4390    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 443     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 700     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 2170    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 62.4    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 28.1    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 0.282   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 1.39    |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 2.31    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 106     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW02-080915

Date / Time Sampled: 08/09/15 11:37

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-32 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 46.8    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 35400   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 4370    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 403     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 785     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 2220    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 96.8    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 29.6    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 0.551   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | 1.10    | J         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 1.84    |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 3.90    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | 0.507   | J         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 106     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW03-080815

Date / Time Sampled: 08/08/15 14:35

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-35 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 28.3    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 50800   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | 1140    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 3910    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 1070    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 626     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 2300    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 493     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 21.7    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 1.56    | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 4.52    |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 10.6    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | 1.60    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 143     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW03-080915

Date / Time Sampled: 08/09/15 13:27

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-38 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 23.1    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Calcium    | 53300   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Iron       | 1330    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Magnesium  | 4070    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Manganese  | 1110    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Potassium  | 761     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Sodium     | 2470    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508038 |
| 200.7  | Zinc       | 529     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508038 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Barium     | 21.1    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cadmium    | 1.69    | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Chromium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Cobalt     | 4.94    |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Copper     | 16.8    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Nickel     | 1.62    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508039 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508039 |
| 2340B  | Hardness   | 150     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508038 |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW04-080815

Date / Time Sampled: 08/08/15 11:10

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-41 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | < 50.0  | U         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 52000   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 6990    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 146     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 1800    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 10000   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 66.0    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | 40.5    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 0.232   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | 1.57    | J         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 1.58    |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 1.93    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 159     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW04-080915

Date / Time Sampled: 08/09/15 12:45

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-44 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 27.1    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 49100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 6810    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 141     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 1730    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 9460    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 51.7    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | 39.6    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 0.261   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | 2.87    |           | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 0.945   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 1.99    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 151     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW05-080815

Date / Time Sampled: 08/08/15 11:50

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-47 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 30.7    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 52300   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 7220    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 128     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 1840    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 10100   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 39.7    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | 41.4    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 0.153   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | 1.68    | J         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 0.581   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 1.81    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 160     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW05-080915

Date / Time Sampled: 08/09/15 12:25

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-50 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 41.6    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 50000   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 6940    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 119     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 1710    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 9440    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 25.6    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | 39.8    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 0.116   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | 2.69    |           | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 0.819   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 1.97    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 153     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW06-080815

Date / Time Sampled: 08/08/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-53 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 45.0    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 35200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 4380    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 444     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 687     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 2170    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 61.5    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | 28.3    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 0.344   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 1.73    |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 2.44    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 106     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW07-080815

Date / Time Sampled: 08/08/15 13:50

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-56 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 6940    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 139000  |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | 14700   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 9440    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 5460    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 1340    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 3620    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 3370    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | < 50.0  | U         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 10.7    | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 24.2    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 437     |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | 27.6    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | 11.7    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 386     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW08-080815

Date / Time Sampled: 08/08/15 14:10

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-59 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 67.1    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 37800   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 2590    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 816     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 530     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 1720    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 224     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | 20.3    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 0.708   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 0.775   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 3.12    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | 1.52    |           | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 105     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW08-080915

Date / Time Sampled: 08/09/15 13:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-62 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 57.7    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 39300   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 2680    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 784     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 525     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 1770    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 225     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | 20.7    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 0.881   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 0.761   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 3.20    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | 1.52    |           | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 109     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMSW12-080915

Date / Time Sampled: 08/09/15 14:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-65 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 32.9    | J         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium    | 50100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron       | < 250   | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium  | 6930    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese  | 144     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium  | 1750    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium     | 9670    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Zinc       | 49.7    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic    | < 2.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium     | 40.8    |           | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium    | 0.208   | J         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium   | 2.20    |           | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt     | 0.896   |           | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper     | 1.96    |           | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead       | < 0.200 | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum | < 1.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium   | < 2.00  | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver     | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium   | < 1.00  | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium   | < 3.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness   | 154     |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

## Certificate of Analysis

TDF #: [none]

## Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: GKMTB01-080815

Date / Time Sampled: 08/08/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-68 A

| Method | Parameter   | Results     | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|-------------|-------------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum    | < 50.0      | U         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Beryllium   | < 5.00      | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Calcium     | < 250       | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Iron        | < 250       | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Magnesium   | < 250       | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Manganese   | < 5.00      | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Potassium   | < 1000      | U         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | Sodium      | < 1000      | U         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508041 |
| 200.7  | <b>Zinc</b> | <b>14.0</b> | J         | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508041 |
| 200.8  | Antimony    | < 1.00      | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Arsenic     | < 2.00      | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Barium      | < 10.0      | U         | ug/L  | 5.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cadmium     | < 0.200     | J,        | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Chromium    | < 2.00      | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Cobalt      | < 0.200     | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Copper      | < 1.00      | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Lead        | < 0.200     | U         | ug/L  | 0.100 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Molybdenum  | < 1.00      | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Nickel      | < 1.00      | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Selenium    | < 2.00      | U         | ug/L  | 1.00  | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Silver      | < 1.00      | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Thallium    | < 1.00      | U         | ug/L  | 0.500 | 1               | 08/10/2015 | SV | 1508042 |
| 200.8  | Vanadium    | < 3.00      | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508042 |
| 2340B  | Hardness    | < 2         |           | mg/L  | 2     | 1               | 08/10/2015 | SV | 1508041 |

"J" Qualifier indicates an estimated value

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-0000

Date / Time Sampled: 08/07/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-01 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 9210    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 65300   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 93500   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 10400   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 998     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 4740    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 10900   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 750     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | 10.9    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | 72.2    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 208     |           | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | 2.35    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | 6.76    | J         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | 3.70    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 278     |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 2000    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | 20.2    |           | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | 6.91    | J         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | 13.6    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | 11.6    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | 52.2    |           | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-0030

Date / Time Sampled: 08/07/15 00:30

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-04 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 12300   |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 66600   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 121000  |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 11100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 1330    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 5410    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 10600   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 980     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | 10.3    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | 87.5    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 207     |           | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | 2.85    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | 7.85    | J         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | 5.12    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 395     |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 2620    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | 25.8    |           | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | 6.67    | J         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | 16.3    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | 60.8    |           | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-1000

Date / Time Sampled: 08/07/15 10:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-07 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 3000    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 53500   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 14300   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 7590    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 245     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 2760    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 10100   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 226     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | 12.6    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 60.7    |           | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | 1.12    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | 0.868   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 57.0    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 192     |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-2005

Date / Time Sampled: 08/06/15 20:05

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-10 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 122     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 53100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 152     | J         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 7210    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 90.1    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 1920    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 10600   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 58.0    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 43.4    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 2.53    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 1.49    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-2108

Date / Time Sampled: 08/06/15 21:08

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-13 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 119     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 52900   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 163     | J         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 7170    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 92.4    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 1910    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 10500   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 61.2    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 45.1    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 2.57    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 1.41    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-2200

Date / Time Sampled: 08/06/15 22:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-16 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 227     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 54100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 670     |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 7310    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 108     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 1970    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 10600   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 66.8    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 46.0    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 3.65    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 10.1    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: AMIMAS-ROTARY PARK-2300

Date / Time Sampled: 08/06/15 23:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-19 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 5530    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 57300   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 23200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 8250    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 341     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 4150    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 10600   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 244     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | 3.07    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | 14.7    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 92.5    |           | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | 0.603   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | 1.05    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 69.5    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 470     |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | 5.14    |           | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | 3.06    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | 14.6    | J         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW01-080815

Date / Time Sampled: 08/08/15 10:05

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-22 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 811     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 55200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 2930    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 7940    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 151     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 2260    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 10900   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 91.5    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 47.9    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 13.8    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 34.1    | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW01-080915

Date / Time Sampled: 08/09/15 12:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-25 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 497     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 51600   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 1410    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 7360    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 121     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 1940    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 9930    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 66.8    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | 2.68    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 43.3    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 9.13    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 19.7    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | 11.9    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW02-080815

Date / Time Sampled: 08/08/15 12:30

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-28 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 1580    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 35800   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 5370    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 4560    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 502     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 1080    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 2200    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 251     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | 5.99    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 34.6    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | 0.897   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | 1.88    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 32.4    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 61.2    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW02-080915

Date / Time Sampled: 08/09/15 11:37

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-31 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 696     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 36800   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 1770    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 4500    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 426     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 870     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 2240    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 205     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | 32.5    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | 0.618   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | 1.57    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 21.9    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 12.0    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW03-080815

Date / Time Sampled: 08/08/15 14:35

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-34 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 1520    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 52200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 3550    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 3980    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 1100    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 719     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 2310    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 531     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | < 50.0  | U         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | 1.61    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | 4.18    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 54.8    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 18.7    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW03-080915

Date / Time Sampled: 08/09/15 13:27

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-37 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 1580    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Calcium    | 54200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Iron       | 3340    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Magnesium  | 4120    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Manganese  | 1120    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Potassium  | 811     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Sodium     | 2470    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508043 |
| 200.7  | Zinc       | 571     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508043 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Barium     | < 50.0  | U         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cadmium    | 1.61    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Cobalt     | 4.45    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Copper     | 57.2    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Lead       | 11.6    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508043 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508043 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW04-080815

Date / Time Sampled: 08/08/15 11:10

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-40 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 803     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 50100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 2920    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 6950    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 186     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 1990    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 9690    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 124     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | 44.1    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | 0.607   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 15.8    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 37.6    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW04-080915

Date / Time Sampled: 08/09/15 12:45

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-43 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 603     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 50400   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 1810    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 7140    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 164     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 1930    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 9810    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 99.9    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | 41.8    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | 0.528   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 11.7    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 22.3    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | 14.9    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW05-080815

Date / Time Sampled: 08/08/15 11:50

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-46 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 688     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 52600   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 2640    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 7350    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 162     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 2010    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 10300   |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 99.0    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | 2.65    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | 44.5    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | 0.520   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 14.4    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 30.7    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | 3.51    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW05-080915

Date / Time Sampled: 08/09/15 12:25

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-49 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 526     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 49700   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 1540    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 7150    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 140     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 1900    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 9700    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 78.2    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | 42.4    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 9.54    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 20.4    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW06-080815

Date / Time Sampled: 08/08/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-52 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 1600    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 35200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 5540    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 4650    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 494     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 1070    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 2240    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 244     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | 40.0    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | 0.704   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | 1.78    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 33.9    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 62.6    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW07-080815

Date / Time Sampled: 08/08/15 13:50

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-55 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 8370    |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 139000  |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 24900   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 9910    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 5450    |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 1790    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 3680    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 3350    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | 11.0    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | 28.8    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | 9.50    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | 23.3    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 438     |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 121     |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | 8.61    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW08-080815

Date / Time Sampled: 08/08/15 14:10

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-58 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 141     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 37100   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 155     | J         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 2610    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 808     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 548     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 1710    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 233     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | < 50.0  | U         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | 0.707   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 6.32    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 2.81    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW08-080915

Date / Time Sampled: 08/09/15 13:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-61 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 108     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 38600   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 125     | J         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 2660    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 777     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 556     | J         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 1740    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 237     |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | < 50.0  | U         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | 0.799   | J         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 4.88    | J         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 1.68    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMSW12-080915

Date / Time Sampled: 08/09/15 14:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-64 A

| Method | Parameter  | Results | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|------------|---------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum   | 469     |           | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium  | < 5.00  | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium    | 50200   |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron       | 1420    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium  | 7160    |           | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese  | 162     |           | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium  | 1900    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium     | 9880    |           | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Zinc       | 89.3    |           | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic    | < 10.0  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium     | 41.2    | J         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium    | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt     | < 1.00  | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper     | 9.42    |           | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead       | 17.5    |           | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum | < 5.00  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium   | < 10.0  | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver     | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium   | < 5.00  | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium   | < 15.0  | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

## Certificate of Analysis

TDF #: [none]

## Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: GKMTB01-080815

Date / Time Sampled: 08/08/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-67 A

| Method | Parameter   | Results     | Qualifier | Units | MDL   | Dilution Factor | Analyzed   | By | Batch   |
|--------|-------------|-------------|-----------|-------|-------|-----------------|------------|----|---------|
| 200.7  | Aluminum    | < 50.0      | U         | ug/L  | 20.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Beryllium   | < 5.00      | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Calcium     | < 250       | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Iron        | < 250       | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Magnesium   | < 250       | U         | ug/L  | 100   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Manganese   | < 5.00      | U         | ug/L  | 2.00  | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Potassium   | < 1000      | U         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | Sodium      | < 1000      | U         | ug/L  | 250   | 1               | 08/10/2015 | SV | 1508046 |
| 200.7  | <b>Zinc</b> | <b>10.4</b> | J         | ug/L  | 10.0  | 1               | 08/10/2015 | SV | 1508046 |
| 200.8  | Antimony    | < 5.00      | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Arsenic     | < 10.0      | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Barium      | < 50.0      | U         | ug/L  | 25.0  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cadmium     | < 1.00      | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Chromium    | < 10.0      | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Cobalt      | < 1.00      | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Copper      | < 5.00      | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Lead        | < 1.00      | U         | ug/L  | 0.500 | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Molybdenum  | < 5.00      | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Nickel      | < 5.00      | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Selenium    | < 10.0      | U         | ug/L  | 5.00  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Silver      | < 5.00      | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Thallium    | < 5.00      | U         | ug/L  | 2.50  | 5               | 08/10/2015 | SV | 1508046 |
| 200.8  | Vanadium    | < 15.0      | U         | ug/L  | 10.0  | 5               | 08/10/2015 | SV | 1508046 |

"J" Qualifier indicates an estimated value

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: AMIMAS-ROTARY PARK-0000  
EPA Tag No:

Date / Time Sampled: 08/07/15 00:00  
Matrix: Surface Water

Workorder: C150802  
Lab Number: C150802-01 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | 0.149   | J         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: AMIMAS-ROTARY PARK-0030  
EPA Tag No:

Date / Time Sampled: 08/07/15 00:30  
Matrix: Surface Water

Workorder: C150802  
Lab Number: C150802-04 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | 0.255   |           | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: AMIMAS-ROTARY PARK-1000  
EPA Tag No:

Date / Time Sampled: 08/07/15 10:00  
Matrix: Surface Water

Workorder: C150802  
Lab Number: C150802-07 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: AMIMAS-ROTARY PARK-2005  
EPA Tag No:

Date / Time Sampled: 08/06/15 20:05  
Matrix: Surface Water

Workorder: C150802  
Lab Number: C150802-10 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: AMIMAS-ROTARY PARK-2108

Date / Time Sampled: 08/06/15 21:08

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-13 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

## Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: AMIMAS-ROTARY PARK-2200

Date / Time Sampled: 08/06/15 22:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-16 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

## Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: AMIMAS-ROTARY PARK-2300

Date / Time Sampled: 08/06/15 23:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-19 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | 0.0880  | J         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

## Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW01-080815

Date / Time Sampled: 08/08/15 10:05

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-22 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW01-080915

Date / Time Sampled: 08/09/15 12:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-25 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW02-080815

Date / Time Sampled: 08/08/15 12:30

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-28 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW02-080915

Date / Time Sampled: 08/09/15 11:37

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-31 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW03-080815

Date / Time Sampled: 08/08/15 14:35

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-34 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW03-080915

Date / Time Sampled: 08/09/15 13:27

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-37 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW04-080815

Date / Time Sampled: 08/08/15 11:10

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-40 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW04-080915

Date / Time Sampled: 08/09/15 12:45

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-43 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW05-080815

Date / Time Sampled: 08/08/15 11:50

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-46 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW05-080915

Date / Time Sampled: 08/09/15 12:25

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-49 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW06-080815

Date / Time Sampled: 08/08/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-52 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW07-080815

Date / Time Sampled: 08/08/15 13:50

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-55 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW08-080815

Date / Time Sampled: 08/08/15 14:10

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-58 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW08-080915

Date / Time Sampled: 08/09/15 13:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-61 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMSW12-080915

Date / Time Sampled: 08/09/15 14:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-64 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

Mercury only (Total) by EPA 245.1 / 7470A Method

Station ID: GKMTB01-080815

Date / Time Sampled: 08/08/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-67 A

| Method | Parameter | Results | Qualifier | Units | MDL    | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|-------|--------|-----------------|------------|----|---------|
| 245.1  | Mercury   | < 0.100 | U         | ug/L  | 0.0500 | 1               | 08/10/2015 | NP | 1508045 |

"J" Qualifier indicates an estimated value

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: AMIMAS-ROTARY PARK-0000

Date / Time Sampled: 08/07/15 00:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-03 A

| Method | Parameter | Results | Qualifier | Units    | MDL | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|----------|-----|-----------------|------------|----|---------|
| 150.1  | pH        | 5.84    |           | pH Units |     | 1               | 08/10/2015 | SW | 1508052 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: AMIMAS-ROTARY PARK-0030

Date / Time Sampled: 08/07/15 00:30

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-06 A

| Method | Parameter | Results | Qualifier | Units    | MDL | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|----------|-----|-----------------|------------|----|---------|
| 150.1  | pH        | 5.98    |           | pH Units |     | 1               | 08/10/2015 | SW | 1508052 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: AMIMAS-ROTARY PARK-1000

Date / Time Sampled: 08/07/15 10:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-09 A

| Method | Parameter | Results | Qualifier | Units    | MDL | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|----------|-----|-----------------|------------|----|---------|
| 150.1  | pH        | 6.68    |           | pH Units |     | 1               | 08/10/2015 | SW | 1508052 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: AMIMAS-ROTARY PARK-2005

Date / Time Sampled: 08/06/15 20:05

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-12 A

| Method | Parameter | Results | Qualifier | Units    | MDL | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|----------|-----|-----------------|------------|----|---------|
| 150.1  | pH        | 7.09    |           | pH Units |     | 1               | 08/10/2015 | SW | 1508052 |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: AMIMAS-ROTARY PARK-2108

Date / Time Sampled: 08/06/15 21:08

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-15 A

| Method | Parameter | Results | Qualifier | Units    | MDL | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|----------|-----|-----------------|------------|----|---------|
| 150.1  | pH        | 7.12    |           | pH Units |     | 1               | 08/10/2015 | SW | 1508052 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: AMIMAS-ROTARY PARK-2200

Date / Time Sampled: 08/06/15 22:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-18 A

| Method | Parameter | Results | Qualifier | Units    | MDL | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|----------|-----|-----------------|------------|----|---------|
| 150.1  | pH        | 7.14    |           | pH Units |     | 1               | 08/10/2015 | SW | 1508052 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: AMIMAS-ROTARY PARK-2300

Date / Time Sampled: 08/06/15 23:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-21 A

| Method | Parameter | Results | Qualifier | Units    | MDL | Dilution Factor | Analyzed   | By | Batch   |
|--------|-----------|---------|-----------|----------|-----|-----------------|------------|----|---------|
| 150.1  | pH        | 7.10    |           | pH Units |     | 1               | 08/10/2015 | SW | 1508052 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: GKMSW01-080915

Date / Time Sampled: 08/09/15 12:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-27 A

| Method    | Parameter        | Results | Qualifier | Units        | MDL  | Dilution Factor | Analyzed   | By | Batch   |
|-----------|------------------|---------|-----------|--------------|------|-----------------|------------|----|---------|
| EPA 310.1 | Total Alkalinity | 76.6    |           | mg CaCO3 / L | 5.00 | 1               | 08/10/2015 | SW | 1508047 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: GKMSW02-080915

Date / Time Sampled: 08/09/15 11:37

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-33 A

| Method    | Parameter        | Results | Qualifier | Units                    | MDL  | Dilution Factor | Analyzed   | By | Batch   |
|-----------|------------------|---------|-----------|--------------------------|------|-----------------|------------|----|---------|
| EPA 310.1 | Total Alkalinity | 35.7    |           | mg CaCO <sub>3</sub> / L | 5.00 | 1               | 08/10/2015 | SW | 1508047 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: GKMSW03-080915

Date / Time Sampled: 08/09/15 13:27

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-39 A

| Method    | Parameter        | Results | Qualifier | Units                    | MDL  | Dilution Factor | Analyzed   | By | Batch   |
|-----------|------------------|---------|-----------|--------------------------|------|-----------------|------------|----|---------|
| EPA 310.1 | Total Alkalinity | 11.2    |           | mg CaCO <sub>3</sub> / L | 5.00 | 1               | 08/10/2015 | SW | 1508047 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: GKMSW04-080915

Date / Time Sampled: 08/09/15 12:45

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-45 A

| Method    | Parameter        | Results | Qualifier | Units                    | MDL  | Dilution Factor | Analyzed   | By | Batch   |
|-----------|------------------|---------|-----------|--------------------------|------|-----------------|------------|----|---------|
| EPA 310.1 | Total Alkalinity | 76.3    |           | mg CaCO <sub>3</sub> / L | 5.00 | 1               | 08/10/2015 | SW | 1508047 |

## Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: GKMSW05-080915

Date / Time Sampled: 08/09/15 12:25

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-51 A

| Method    | Parameter        | Results | Qualifier | Units                    | MDL  | Dilution Factor | Analyzed   | By | Batch   |
|-----------|------------------|---------|-----------|--------------------------|------|-----------------|------------|----|---------|
| EPA 310.1 | Total Alkalinity | 77.2    |           | mg CaCO <sub>3</sub> / L | 5.00 | 1               | 08/10/2015 | SW | 1508047 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: GKMSW08-080915

Date / Time Sampled: 08/09/15 13:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-63 A

| Method    | Parameter        | Results | Qualifier | Units        | MDL  | Dilution Factor | Analyzed   | By | Batch   |
|-----------|------------------|---------|-----------|--------------|------|-----------------|------------|----|---------|
| EPA 310.1 | Total Alkalinity | 32.7    |           | mg CaCO3 / L | 5.00 | 1               | 08/10/2015 | SW | 1508047 |

Classical Chemistry by EPA/ASTM/APHA Methods

Station ID: GKMSW12-080915

Date / Time Sampled: 08/09/15 14:00

Workorder: C150802

EPA Tag No:

Matrix: Surface Water

Lab Number: C150802-66 A

| Method    | Parameter        | Results | Qualifier | Units        | MDL  | Dilution Factor | Analyzed   | By | Batch   |
|-----------|------------------|---------|-----------|--------------|------|-----------------|------------|----|---------|
| EPA 310.1 | Total Alkalinity | 76.7    |           | mg CaCO3 / L | 5.00 | 1               | 08/10/2015 | SW | 1508047 |

"J" Qualifier indicates an estimated value

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | % R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|-----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|-----|------------|------------|------------------|

## ICPMS-PE DRC-II

Batch 1508039 - No Lab Prep Req'd

Water

ICPMS-PE DRC-II

|                             |                    |                               |
|-----------------------------|--------------------|-------------------------------|
| Method Blank (1508039-BLK1) | Dilution Factor: 1 | Prepared & Analyzed: 08/10/15 |
|-----------------------------|--------------------|-------------------------------|

|            |         |       |      |
|------------|---------|-------|------|
| Vanadium   | < 2.00  | 3.00  | ug/L |
| Chromium   | < 1.00  | 2.00  | "    |
| Cobalt     | < 0.100 | 0.200 | "    |
| Nickel     | < 0.500 | 1.00  | "    |
| Copper     | < 0.500 | 1.00  | "    |
| Arsenic    | < 0.500 | 2.00  | "    |
| Selenium   | < 1.00  | 2.00  | "    |
| Molybdenum | < 1.00  | 1.00  | "    |
| Silver     | < 0.500 | 1.00  | "    |
| Cadmium    | < 0.100 | 0.200 | "    |
| Antimony   | < 0.500 | 1.00  | "    |
| Barium     | < 5.00  | 10.0  | "    |
| Thallium   | < 0.500 | 1.00  | "    |
| Lead       | < 0.100 | 0.200 | "    |

|                                  |                    |                               |
|----------------------------------|--------------------|-------------------------------|
| Method Blank Spike (1508039-BS1) | Dilution Factor: 1 | Prepared & Analyzed: 08/10/15 |
|----------------------------------|--------------------|-------------------------------|

|            |      |       |      |     |    |        |
|------------|------|-------|------|-----|----|--------|
| Vanadium   | 93.0 | 3.00  | ug/L | 100 | 93 | 85-115 |
| Chromium   | 91.8 | 2.00  | "    | 100 | 92 | 85-115 |
| Cobalt     | 92.7 | 0.200 | "    | 100 | 93 | 85-115 |
| Nickel     | 92.2 | 1.00  | "    | 100 | 92 | 85-115 |
| Copper     | 91.8 | 1.00  | "    | 100 | 92 | 85-115 |
| Arsenic    | 94.6 | 2.00  | "    | 100 | 95 | 85-115 |
| Selenium   | 482  | 2.00  | "    | 500 | 96 | 85-115 |
| Molybdenum | 96.3 | 1.00  | "    | 100 | 96 | 85-115 |
| Silver     | 94.7 | 1.00  | "    | 100 | 95 | 85-115 |
| Cadmium    | 96.4 | 0.200 | "    | 100 | 96 | 85-115 |
| Antimony   | 98.2 | 1.00  | "    | 100 | 98 | 85-115 |
| Barium     | 94.4 | 10.0  | "    | 100 | 94 | 85-115 |
| Thallium   | 94.8 | 1.00  | "    | 100 | 95 | 85-115 |
| Lead       | 95.2 | 0.200 | "    | 100 | 95 | 85-115 |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                           | Result  | Det. Limit         | Units | Spike Level        | Source Result | % R                           | % R Limits | % D or RPD | % D or RPD Limit |
|-----------------------------------|---------|--------------------|-------|--------------------|---------------|-------------------------------|------------|------------|------------------|
| Batch 1508039 - No Lab Prep Req'd |         |                    |       | Water              |               | ICPMS-PE DRC-II               |            |            |                  |
| Duplicate (1508039-DUP1)          |         | Dilution Factor: 1 |       | Source: C150802-23 |               | Prepared & Analyzed: 08/10/15 |            |            |                  |
| Vanadium                          | < 2.00  | 3.00               | ug/L  |                    | < 2.00        |                               |            |            | 20               |
| Chromium                          | 1.59    | 2.00               | "     |                    | 1.55          |                               |            | 3          | 20               |
| Cobalt                            | 0.606   | 0.200              | "     |                    | 0.653         |                               |            | 8          | 20               |
| Nickel                            | < 0.500 | 1.00               | "     |                    | < 0.500       |                               |            |            | 20               |
| Copper                            | 1.81    | 1.00               | "     |                    | 1.73          |                               |            | 4          | 20               |
| Arsenic                           | < 0.500 | 2.00               | "     |                    | < 0.500       |                               |            |            | 20               |
| Selenium                          | < 1.00  | 2.00               | "     |                    | < 1.00        |                               |            |            | 20               |
| Molybdenum                        | < 1.00  | 1.00               | "     |                    | < 1.00        |                               |            |            | 20               |
| Silver                            | < 0.500 | 1.00               | "     |                    | < 0.500       |                               |            |            | 20               |
| Cadmium                           | < 0.100 | 0.200              | "     |                    | < 0.100       |                               |            |            | 20               |
| Antimony                          | < 0.500 | 1.00               | "     |                    | < 0.500       |                               |            |            | 20               |
| Barium                            | 40.9    | 10.0               | "     |                    | 41.4          |                               |            | 1          | 20               |
| Thallium                          | < 0.500 | 1.00               | "     |                    | < 0.500       |                               |            |            | 20               |
| Lead                              | < 0.100 | 0.200              | "     |                    | < 0.100       |                               |            |            | 20               |
| Matrix Spike (1508039-MS1)        |         | Dilution Factor: 1 |       | Source: C150802-23 |               | Prepared & Analyzed: 08/10/15 |            |            |                  |
| Vanadium                          | 90.3    | 3.00               | ug/L  | 100                | < 2.00        | 90                            | 70-130     |            |                  |
| Chromium                          | 89.3    | 2.00               | "     | 100                | 1.55          | 88                            | 70-130     |            |                  |
| Cobalt                            | 88.6    | 0.200              | "     | 100                | 0.653         | 88                            | 70-130     |            |                  |
| Nickel                            | 86.4    | 1.00               | "     | 100                | < 0.500       | 86                            | 70-130     |            |                  |
| Copper                            | 87.4    | 1.00               | "     | 100                | 1.73          | 86                            | 70-130     |            |                  |
| Arsenic                           | 94.1    | 2.00               | "     | 100                | < 0.500       | 94                            | 70-130     |            |                  |
| Selenium                          | 496     | 2.00               | "     | 500                | < 1.00        | 99                            | 70-130     |            |                  |
| Molybdenum                        | 100     | 1.00               | "     | 100                | < 1.00        | 100                           | 70-130     |            |                  |
| Silver                            | 93.3    | 1.00               | "     | 100                | < 0.500       | 93                            | 70-130     |            |                  |
| Cadmium                           | 97.4    | 0.200              | "     | 100                | < 0.100       | 97                            | 70-130     |            |                  |
| Antimony                          | 100     | 1.00               | "     | 100                | < 0.500       | 100                           | 70-130     |            |                  |
| Barium                            | 136     | 10.0               | "     | 100                | 41.4          | 94                            | 70-130     |            |                  |
| Thallium                          | 94.3    | 1.00               | "     | 100                | < 0.500       | 94                            | 70-130     |            |                  |
| Lead                              | 94.4    | 0.200              | "     | 100                | < 0.100       | 94                            | 70-130     |            |                  |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | %R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|

Batch 1508039 - No Lab Prep Req'd

Water

ICPMS-PE DRC-II

Matrix Spike (1508039-MS2)

Dilution Factor: 1

Source: C150802-26

Prepared &amp; Analyzed: 08/10/15

|            |      |       |      |     |         |     |        |  |  |
|------------|------|-------|------|-----|---------|-----|--------|--|--|
| Vanadium   | 88.9 | 3.00  | ug/L | 100 | < 2.00  | 89  | 70-130 |  |  |
| Chromium   | 89.5 | 2.00  | "    | 100 | 3.62    | 86  | 70-130 |  |  |
| Cobalt     | 87.2 | 0.200 | "    | 100 | 0.872   | 86  | 70-130 |  |  |
| Nickel     | 84.2 | 1.00  | "    | 100 | < 0.500 | 84  | 70-130 |  |  |
| Copper     | 85.6 | 1.00  | "    | 100 | 2.09    | 84  | 70-130 |  |  |
| Arsenic    | 101  | 2.00  | "    | 100 | 0.512   | 100 | 70-130 |  |  |
| Selenium   | 509  | 2.00  | "    | 500 | < 1.00  | 102 | 70-130 |  |  |
| Molybdenum | 98.5 | 1.00  | "    | 100 | < 1.00  | 98  | 70-130 |  |  |
| Silver     | 93.3 | 1.00  | "    | 100 | < 0.500 | 93  | 70-130 |  |  |
| Cadmium    | 95.0 | 0.200 | "    | 100 | < 0.100 | 95  | 70-130 |  |  |
| Antimony   | 98.8 | 1.00  | "    | 100 | < 0.500 | 99  | 70-130 |  |  |
| Barium     | 134  | 10.0  | "    | 100 | 39.4    | 95  | 70-130 |  |  |
| Thallium   | 93.8 | 1.00  | "    | 100 | < 0.500 | 94  | 70-130 |  |  |
| Lead       | 92.2 | 0.200 | "    | 100 | < 0.100 | 92  | 70-130 |  |  |

Batch 1508042 - No Lab Prep Req'd

Water

ICPMS-PE DRC-II

Method Blank (1508042-BLK1)

Dilution Factor: 1

Prepared &amp; Analyzed: 08/10/15

|            |         |       |      |  |  |  |  |  |  |
|------------|---------|-------|------|--|--|--|--|--|--|
| Vanadium   | < 2.00  | 3.00  | ug/L |  |  |  |  |  |  |
| Chromium   | < 1.00  | 2.00  | "    |  |  |  |  |  |  |
| Cobalt     | < 0.100 | 0.200 | "    |  |  |  |  |  |  |
| Nickel     | < 0.500 | 1.00  | "    |  |  |  |  |  |  |
| Copper     | < 0.500 | 1.00  | "    |  |  |  |  |  |  |
| Arsenic    | < 0.500 | 2.00  | "    |  |  |  |  |  |  |
| Selenium   | < 1.00  | 2.00  | "    |  |  |  |  |  |  |
| Molybdenum | < 1.00  | 1.00  | "    |  |  |  |  |  |  |
| Silver     | < 0.500 | 1.00  | "    |  |  |  |  |  |  |
| Cadmium    | < 0.100 | 0.200 | "    |  |  |  |  |  |  |
| Antimony   | < 0.500 | 1.00  | "    |  |  |  |  |  |  |
| Barium     | < 5.00  | 10.0  | "    |  |  |  |  |  |  |
| Thallium   | < 0.500 | 1.00  | "    |  |  |  |  |  |  |
| Lead       | < 0.100 | 0.200 | "    |  |  |  |  |  |  |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | %R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|

Batch 1508042 - No Lab Prep Req'd

Water

ICPMS-PE DRC-II

Method Blank Spike (1508042-BS1)

Dilution Factor: 1

Prepared &amp; Analyzed: 08/10/15

|            |      |       |      |     |  |    |        |  |  |
|------------|------|-------|------|-----|--|----|--------|--|--|
| Vanadium   | 92.9 | 3.00  | ug/L | 100 |  | 93 | 85-115 |  |  |
| Chromium   | 91.0 | 2.00  | "    | 100 |  | 91 | 85-115 |  |  |
| Cobalt     | 93.8 | 0.200 | "    | 100 |  | 94 | 85-115 |  |  |
| Nickel     | 91.9 | 1.00  | "    | 100 |  | 92 | 85-115 |  |  |
| Copper     | 90.4 | 1.00  | "    | 100 |  | 90 | 85-115 |  |  |
| Arsenic    | 91.1 | 2.00  | "    | 100 |  | 91 | 85-115 |  |  |
| Selenium   | 466  | 2.00  | "    | 500 |  | 93 | 85-115 |  |  |
| Molybdenum | 95.5 | 1.00  | "    | 100 |  | 95 | 85-115 |  |  |
| Silver     | 94.0 | 1.00  | "    | 100 |  | 94 | 85-115 |  |  |
| Cadmium    | 97.1 | 0.200 | "    | 100 |  | 97 | 85-115 |  |  |
| Antimony   | 97.7 | 1.00  | "    | 100 |  | 98 | 85-115 |  |  |
| Barium     | 97.1 | 10.0  | "    | 100 |  | 97 | 85-115 |  |  |
| Thallium   | 94.6 | 1.00  | "    | 100 |  | 95 | 85-115 |  |  |
| Lead       | 93.8 | 0.200 | "    | 100 |  | 94 | 85-115 |  |  |

Duplicate (1508042-DUP1)

Dilution Factor: 1

Source: C150802-41

Prepared &amp; Analyzed: 08/10/15

|            |         |       |      |         |  |  |    |  |    |
|------------|---------|-------|------|---------|--|--|----|--|----|
| Vanadium   | < 2.00  | 3.00  | ug/L | < 2.00  |  |  |    |  | 20 |
| Chromium   | 1.70    | 2.00  | "    | 1.57    |  |  | 8  |  | 20 |
| Cobalt     | 1.47    | 0.200 | "    | 1.58    |  |  | 7  |  | 20 |
| Nickel     | < 0.500 | 1.00  | "    | < 0.500 |  |  |    |  | 20 |
| Copper     | 2.01    | 1.00  | "    | 1.93    |  |  | 4  |  | 20 |
| Arsenic    | < 0.500 | 2.00  | "    | < 0.500 |  |  |    |  | 20 |
| Selenium   | < 1.00  | 2.00  | "    | < 1.00  |  |  |    |  | 20 |
| Molybdenum | < 1.00  | 1.00  | "    | < 1.00  |  |  |    |  | 20 |
| Silver     | < 0.500 | 1.00  | "    | < 0.500 |  |  |    |  | 20 |
| Cadmium    | 0.210   | 0.200 | "    | 0.232   |  |  | 10 |  | 20 |
| Antimony   | < 0.500 | 1.00  | "    | < 0.500 |  |  |    |  | 20 |
| Barium     | 39.6    | 10.0  | "    | 40.5    |  |  | 2  |  | 20 |
| Thallium   | < 0.500 | 1.00  | "    | < 0.500 |  |  |    |  | 20 |
| Lead       | < 0.100 | 0.200 | "    | < 0.100 |  |  |    |  | 20 |

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TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | %R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|

Batch 1508042 - No Lab Prep Req'd

Water

ICPMS-PE DRC-II

Matrix Spike (1508042-MS1)

Dilution Factor: 1

Source: C150802-41

Prepared &amp; Analyzed: 08/10/15

|            |      |       |      |     |         |     |        |  |  |
|------------|------|-------|------|-----|---------|-----|--------|--|--|
| Vanadium   | 87.5 | 3.00  | ug/L | 100 | < 2.00  | 87  | 70-130 |  |  |
| Chromium   | 88.9 | 2.00  | "    | 100 | 1.57    | 87  | 70-130 |  |  |
| Cobalt     | 88.0 | 0.200 | "    | 100 | 1.58    | 86  | 70-130 |  |  |
| Nickel     | 84.7 | 1.00  | "    | 100 | < 0.500 | 85  | 70-130 |  |  |
| Copper     | 85.9 | 1.00  | "    | 100 | 1.93    | 84  | 70-130 |  |  |
| Arsenic    | 99.9 | 2.00  | "    | 100 | < 0.500 | 100 | 70-130 |  |  |
| Selenium   | 501  | 2.00  | "    | 500 | < 1.00  | 100 | 70-130 |  |  |
| Molybdenum | 96.3 | 1.00  | "    | 100 | < 1.00  | 96  | 70-130 |  |  |
| Silver     | 89.5 | 1.00  | "    | 100 | < 0.500 | 89  | 70-130 |  |  |
| Cadmium    | 96.8 | 0.200 | "    | 100 | 0.232   | 97  | 70-130 |  |  |
| Antimony   | 98.0 | 1.00  | "    | 100 | < 0.500 | 98  | 70-130 |  |  |
| Barium     | 133  | 10.0  | "    | 100 | 40.5    | 92  | 70-130 |  |  |
| Thallium   | 89.8 | 1.00  | "    | 100 | < 0.500 | 90  | 70-130 |  |  |
| Lead       | 90.4 | 0.200 | "    | 100 | < 0.100 | 90  | 70-130 |  |  |

Batch 1508051 - 1508042

Water

ICPMS-PE DRC-II

Serial Dilution (1508051-SRD1)

Dilution Factor: 5

Source: C150802-23

Prepared &amp; Analyzed: 08/10/15

|            |         |      |      |        |  |  |  |     |    |
|------------|---------|------|------|--------|--|--|--|-----|----|
| Vanadium   | < 10.0  | 15.0 | ug/L | < 2.00 |  |  |  |     | 10 |
| Chromium   | < 5.00  | 10.0 | "    | 1.55   |  |  |  |     | 10 |
| Cobalt     | 0.646   | 1.00 | "    | 0.653  |  |  |  | 1   | 10 |
| Nickel     | < 2.50  | 5.00 | "    | < 0.50 |  |  |  |     | 10 |
| Copper     | < 2.50  | 5.00 | "    | 1.73   |  |  |  |     | 10 |
| Arsenic    | < 2.50  | 10.0 | "    | < 0.50 |  |  |  |     | 10 |
| Selenium   | < 5.00  | 10.0 | "    | < 1.00 |  |  |  |     | 10 |
| Molybdenum | < 5.00  | 5.00 | "    | < 1.00 |  |  |  |     | 10 |
| Silver     | < 2.50  | 5.00 | "    | < 0.50 |  |  |  |     | 10 |
| Cadmium    | < 0.500 | 1.00 | "    | < 0.10 |  |  |  |     | 10 |
| Antimony   | < 2.50  | 5.00 | "    | < 0.50 |  |  |  |     | 10 |
| Barium     | 41.5    | 50.0 | "    | 41.4   |  |  |  | 0.1 | 10 |
| Thallium   | < 2.50  | 5.00 | "    | < 0.50 |  |  |  |     | 10 |
| Lead       | < 0.500 | 1.00 | "    | < 0.10 |  |  |  |     | 10 |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                        | Result  | Det. Limit         | Units | Spike Level        | Source Result | % R                           | % R Limits      | % D or RPD | % D or RPD Limit |
|--------------------------------|---------|--------------------|-------|--------------------|---------------|-------------------------------|-----------------|------------|------------------|
| Batch 1508051 - 1508042        |         |                    | Water |                    |               |                               | ICPMS-PE DRC-II |            |                  |
| Serial Dilution (1508051-SRD2) |         | Dilution Factor: 5 |       | Source: C150802-41 |               | Prepared & Analyzed: 08/10/15 |                 |            |                  |
| Vanadium                       | < 10.0  | 15.0               | ug/L  |                    | < 2.00        |                               |                 |            | 10               |
| Chromium                       | < 5.00  | 10.0               | "     |                    | 1.57          |                               |                 |            | 10               |
| Cobalt                         | 1.63    | 1.00               | "     |                    | 1.58          |                               |                 | 3          | 10               |
| Nickel                         | < 2.50  | 5.00               | "     |                    | < 0.50        |                               |                 |            | 10               |
| Copper                         | < 2.50  | 5.00               | "     |                    | 1.93          |                               |                 |            | 10               |
| Arsenic                        | < 2.50  | 10.0               | "     |                    | < 0.50        |                               |                 |            | 10               |
| Selenium                       | < 5.00  | 10.0               | "     |                    | < 1.00        |                               |                 |            | 10               |
| Molybdenum                     | < 5.00  | 5.00               | "     |                    | < 1.00        |                               |                 |            | 10               |
| Silver                         | < 2.50  | 5.00               | "     |                    | < 0.50        |                               |                 |            | 10               |
| Cadmium                        | < 0.500 | 1.00               | "     |                    | 0.232         |                               |                 |            | 10               |
| Antimony                       | < 2.50  | 5.00               | "     |                    | < 0.50        |                               |                 |            | 10               |
| Barium                         | 40.4    | 50.0               | "     |                    | 40.5          |                               |                 | 0.4        | 10               |
| Thallium                       | < 2.50  | 5.00               | "     |                    | < 0.50        |                               |                 |            | 10               |
| Lead                           | < 0.500 | 1.00               | "     |                    | < 0.10        |                               |                 |            | 10               |

## ICPOE - PE Optima

| Batch 1508038 - No Lab Prep Req'd |        |                    | Water | ICPOE - PE Optima                       |
|-----------------------------------|--------|--------------------|-------|---|
| Method Blank (1508038-BLK1)       |        | Dilution Factor: 1 |       | Prepared: 08/09/15   Analyzed: 08/10/15 |
| Aluminum                          | < 20.0 | 50.0               | ug/L  |   |
| Beryllium                         | < 2.00 | 5.00               | "     |   |
| Calcium                           | < 100  | 250                | "     |   |
| Iron                              | < 100  | 250                | "     |   |
| Potassium                         | < 250  | 1000               | "     |   |
| Magnesium                         | < 100  | 250                | "     |   |
| Manganese                         | < 2.00 | 5.00               | "     |   |
| Sodium                            | < 250  | 1000               | "     |   |
| Zinc                              | < 10.0 | 20.0               | "     |   |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                           | Result | Det. Limit         | Units | Spike Level                           | Source Result | %R  | % R Limits                            | % D or RPD | % D or RPD Limit |
|-----------------------------------|--------|--------------------|-------|---------------------------------------|---------------|-----|---------------------------------------|------------|------------------|
| Batch 1508038 - No Lab Prep Req'd |        |                    |       | <i>Water</i>                          |               |     | ICPOE - PE Optima                     |            |                  |
| Method Blank Spike (1508038-BS1)  |        | Dilution Factor: 1 |       | Prepared: 08/09/15 Analyzed: 08/10/15 |               |     |                                       |            |                  |
| Aluminum                          | 9985   | 50.0               | ug/L  | 10100                                 |               | 99  | 85-115                                |            |                  |
| Beryllium                         | 98.66  | 5.00               | "     | 100                                   |               | 99  | 85-115                                |            |                  |
| Calcium                           | 10080  | 250                | "     | 10100                                 |               | 100 | 85-115                                |            |                  |
| Iron                              | 10070  | 250                | "     | 10100                                 |               | 100 | 85-115                                |            |                  |
| Potassium                         | 10190  | 1000               | "     | 10100                                 |               | 101 | 85-115                                |            |                  |
| Magnesium                         | 10050  | 250                | "     | 10100                                 |               | 99  | 85-115                                |            |                  |
| Manganese                         | 98.15  | 5.00               | "     | 100                                   |               | 98  | 85-115                                |            |                  |
| Sodium                            | 10050  | 1000               | "     | 10100                                 |               | 100 | 85-115                                |            |                  |
| Zinc                              | 100.6  | 20.0               | "     | 100                                   |               | 101 | 85-115                                |            |                  |
| Duplicate (1508038-DUP1)          |        | Dilution Factor: 1 |       | Source: C150802-23                    |               |     | Prepared: 08/09/15 Analyzed: 08/10/15 |            |                  |
| Aluminum                          | 35.17  | 50.0               | ug/L  |                                       | 42.68         |     |                                       | 19         | 20               |
| Beryllium                         | < 2.00 | 5.00               | "     |                                       | < 2.00        |     |                                       |            | 20               |
| Calcium                           | 53430  | 250                | "     |                                       | 53310         |     |                                       | 0.2        | 20               |
| Iron                              | < 100  | 250                | "     |                                       | < 100         |     |                                       |            | 20               |
| Potassium                         | 1904   | 1000               | "     |                                       | 1867          |     |                                       | 2          | 20               |
| Magnesium                         | 7577   | 250                | "     |                                       | 7497          |     |                                       | 1          | 20               |
| Manganese                         | 102.6  | 5.00               | "     |                                       | 101.5         |     |                                       | 1          | 20               |
| Sodium                            | 10520  | 1000               | "     |                                       | 10520         |     |                                       | 0.04       | 20               |
| Zinc                              | 20.46  | 20.0               | "     |                                       | 22.81         |     |                                       | 11         | 20               |
| Matrix Spike (1508038-MS1)        |        | Dilution Factor: 1 |       | Source: C150802-23                    |               |     | Prepared: 08/09/15 Analyzed: 08/10/15 |            |                  |
| Aluminum                          | 10280  | 50.0               | ug/L  | 10100                                 | 42.68         | 101 | 70-130                                |            |                  |
| Beryllium                         | 99.60  | 5.00               | "     | 100                                   | < 2.00        | 100 | 70-130                                |            |                  |
| Calcium                           | 62190  | 250                | "     | 10100                                 | 53310         | 88  | 70-130                                |            |                  |
| Iron                              | 10270  | 250                | "     | 10100                                 | < 100         | 102 | 70-130                                |            |                  |
| Potassium                         | 12370  | 1000               | "     | 10100                                 | 1867          | 104 | 70-130                                |            |                  |
| Magnesium                         | 17530  | 250                | "     | 10100                                 | 7497          | 99  | 70-130                                |            |                  |
| Manganese                         | 199.0  | 5.00               | "     | 100                                   | 101.5         | 97  | 70-130                                |            |                  |
| Sodium                            | 20620  | 1000               | "     | 10100                                 | 10520         | 100 | 70-130                                |            |                  |
| Zinc                              | 118.6  | 20.0               | "     | 100                                   | 22.81         | 96  | 70-130                                |            |                  |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | %R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|

Batch 1508038 - No Lab Prep Req'd

Water

ICPOE - PE Optima

Matrix Spike (1508038-MS2)

Dilution Factor: 1

Source: C150802-26

Prepared: 08/09/15 Analyzed: 08/10/15

|           |       |      |      |       |        |     |        |  |  |
|-----------|-------|------|------|-------|--------|-----|--------|--|--|
| Aluminum  | 10120 | 50.0 | ug/L | 10100 | 75.60  | 99  | 70-130 |  |  |
| Beryllium | 99.33 | 5.00 | "    | 100   | < 2.00 | 99  | 70-130 |  |  |
| Calcium   | 58900 | 250  | "    | 10100 | 50670  | 81  | 70-130 |  |  |
| Iron      | 10080 | 250  | "    | 10100 | < 100  | 100 | 70-130 |  |  |
| Potassium | 12040 | 1000 | "    | 10100 | 1774   | 102 | 70-130 |  |  |
| Magnesium | 17020 | 250  | "    | 10100 | 7266   | 97  | 70-130 |  |  |
| Manganese | 179.0 | 5.00 | "    | 100   | 81.85  | 97  | 70-130 |  |  |
| Sodium    | 19610 | 1000 | "    | 10100 | 9758   | 98  | 70-130 |  |  |
| Zinc      | 105.9 | 20.0 | "    | 100   | < 10.0 | 106 | 70-130 |  |  |

Batch 1508041 - No Lab Prep Req'd

Water

ICPOE - PE Optima

Method Blank (1508041-BLK1)

Dilution Factor: 1

Prepared &amp; Analyzed: 08/10/15

|           |        |      |      |  |  |  |  |  |  |
|-----------|--------|------|------|--|--|--|--|--|--|
| Aluminum  | < 20.0 | 50.0 | ug/L |  |  |  |  |  |  |
| Beryllium | < 2.00 | 5.00 | "    |  |  |  |  |  |  |
| Calcium   | < 100  | 250  | "    |  |  |  |  |  |  |
| Iron      | < 100  | 250  | "    |  |  |  |  |  |  |
| Potassium | < 250  | 1000 | "    |  |  |  |  |  |  |
| Magnesium | < 100  | 250  | "    |  |  |  |  |  |  |
| Manganese | < 2.00 | 5.00 | "    |  |  |  |  |  |  |
| Sodium    | < 250  | 1000 | "    |  |  |  |  |  |  |
| Zinc      | < 10.0 | 20.0 | "    |  |  |  |  |  |  |

Method Blank Spike (1508041-BS1)

Dilution Factor: 1

Prepared &amp; Analyzed: 08/10/15

|           |       |      |      |       |  |     |        |  |  |
|-----------|-------|------|------|-------|--|-----|--------|--|--|
| Aluminum  | 9997  | 50.0 | ug/L | 10100 |  | 99  | 85-115 |  |  |
| Beryllium | 98.43 | 5.00 | "    | 100   |  | 98  | 85-115 |  |  |
| Calcium   | 10070 | 250  | "    | 10100 |  | 100 | 85-115 |  |  |
| Iron      | 10040 | 250  | "    | 10100 |  | 99  | 85-115 |  |  |
| Potassium | 10210 | 1000 | "    | 10100 |  | 101 | 85-115 |  |  |
| Magnesium | 10030 | 250  | "    | 10100 |  | 99  | 85-115 |  |  |
| Manganese | 97.34 | 5.00 | "    | 100   |  | 97  | 85-115 |  |  |
| Sodium    | 10080 | 1000 | "    | 10100 |  | 100 | 85-115 |  |  |
| Zinc      | 99.87 | 20.0 | "    | 100   |  | 100 | 85-115 |  |  |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                           | Result | Det. Limit         | Units              | Spike Level | Source Result                         | %R  | %R Limits         | %D or RPD | %D or RPD Limit |
|-----------------------------------|--------|--------------------|--------------------|-------------|---------------------------------------|-----|-------------------|-----------|-----------------|
| Batch 1508041 - No Lab Prep Req'd |        |                    | Water              |             |                                       |     | ICPOE - PE Optima |           |                 |
| Duplicate (1508041-DUP1)          |        | Dilution Factor: 1 | Source: C150802-41 |             | Prepared & Analyzed: 08/10/15         |     |                   |           |                 |
| Aluminum                          | 24.39  | 50.0               | ug/L               |             | < 20.0                                |     |                   |           | 20              |
| Beryllium                         | < 2.00 | 5.00               | "                  |             | < 2.00                                |     |                   |           | 20              |
| Calcium                           | 51610  | 250                | "                  |             | 52020                                 |     |                   | 0.8       | 20              |
| Iron                              | < 100  | 250                | "                  |             | < 100                                 |     |                   |           | 20              |
| Potassium                         | 1813   | 1000               | "                  |             | 1799                                  |     |                   | 0.8       | 20              |
| Magnesium                         | 7039   | 250                | "                  |             | 6986                                  |     |                   | 0.8       | 20              |
| Manganese                         | 145.2  | 5.00               | "                  |             | 145.6                                 |     |                   | 0.3       | 20              |
| Sodium                            | 9948   | 1000               | "                  |             | 10010                                 |     |                   | 0.6       | 20              |
| Zinc                              | 66.15  | 20.0               | "                  |             | 65.97                                 |     |                   | 0.3       | 20              |
| Matrix Spike (1508041-MS1)        |        | Dilution Factor: 1 | Source: C150802-41 |             | Prepared & Analyzed: 08/10/15         |     |                   |           |                 |
| Aluminum                          | 10060  | 50.0               | ug/L               | 10100       | < 20.0                                | 100 | 70-130            |           |                 |
| Beryllium                         | 98.70  | 5.00               | "                  | 100         | < 2.00                                | 99  | 70-130            |           |                 |
| Calcium                           | 60530  | 250                | "                  | 10100       | 52020                                 | 84  | 70-130            |           |                 |
| Iron                              | 10090  | 250                | "                  | 10100       | < 100                                 | 100 | 70-130            |           |                 |
| Potassium                         | 12100  | 1000               | "                  | 10100       | 1799                                  | 102 | 70-130            |           |                 |
| Magnesium                         | 16880  | 250                | "                  | 10100       | 6986                                  | 98  | 70-130            |           |                 |
| Manganese                         | 241.9  | 5.00               | "                  | 100         | 145.6                                 | 96  | 70-130            |           |                 |
| Sodium                            | 19620  | 1000               | "                  | 10100       | 10010                                 | 95  | 70-130            |           |                 |
| Zinc                              | 161.5  | 20.0               | "                  | 100         | 65.97                                 | 96  | 70-130            |           |                 |
| Batch 1508049 - 1508041           |        |                    | Water              |             |                                       |     | ICPOE - PE Optima |           |                 |
| Serial Dilution (1508049-SRD1)    |        | Dilution Factor: 5 | Source: C150802-23 |             | Prepared: 08/09/15 Analyzed: 08/10/15 |     |                   |           |                 |
| Aluminum                          | < 100  | 250                | ug/L               |             | 42.68                                 |     |                   |           | 10              |
| Beryllium                         | < 10.0 | 25.0               | "                  |             | < 2.00                                |     |                   |           | 10              |
| Calcium                           | 52210  | 1250               | "                  |             | 53310                                 |     |                   | 2         | 10              |
| Iron                              | < 500  | 1250               | "                  |             | < 100.00                              |     |                   |           | 10              |
| Potassium                         | 1987   | 5000               | "                  |             | 1867                                  |     |                   | 6         | 10              |
| Magnesium                         | 7501   | 1250               | "                  |             | 7497                                  |     |                   | 0.06      | 10              |
| Manganese                         | 101.2  | 25.0               | "                  |             | 101.5                                 |     |                   | 0.3       | 10              |
| Sodium                            | 10410  | 5000               | "                  |             | 10520                                 |     |                   | 1         | 10              |
| Zinc                              | < 50.0 | 100                | "                  |             | 22.81                                 |     |                   |           | 10              |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Dissolved) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                        | Result | Det. Limit         | Units | Spike Level        | Source Result | %R                            | %R Limits         | %D or RPD | %D or RPD Limit |
|--------------------------------|--------|--------------------|-------|--------------------|---------------|-------------------------------|-------------------|-----------|-----------------|
| Batch 1508049 - 1508041        |        |                    | Water |                    |               |                               | ICPOE - PE Optima |           |                 |
| Serial Dilution (1508049-SRD2) |        | Dilution Factor: 5 |       | Source: C150802-41 |               | Prepared & Analyzed: 08/10/15 |                   |           |                 |
| Aluminum                       | < 100  | 250                | ug/L  |                    | < 20.00       |                               |                   |           | 10              |
| Beryllium                      | < 10.0 | 25.0               | "     |                    | < 2.00        |                               |                   |           | 10              |
| Calcium                        | 50680  | 1250               | "     |                    | 52020         |                               |                   | 3         | 10              |
| Iron                           | < 500  | 1250               | "     |                    | < 100.00      |                               |                   |           | 10              |
| Potassium                      | 1781   | 5000               | "     |                    | 1799          |                               |                   | 1         | 10              |
| Magnesium                      | 6947   | 1250               | "     |                    | 6986          |                               |                   | 0.6       | 10              |
| Manganese                      | 144.9  | 25.0               | "     |                    | 145.6         |                               |                   | 0.5       | 10              |
| Sodium                         | 9829   | 5000               | "     |                    | 10010         |                               |                   | 2         | 10              |
| Zinc                           | 65.34  | 100                | "     |                    | 65.97         |                               |                   | 1         | 10              |

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.  
RPD = Relative Percent Difference %D = % Difference. DL = Detection Limit for QC sample

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | %R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|

## ICPMS-PE DRC-II

Batch 1508043 - 200.2 - TR Metals

Water

ICPMS-PE DRC-II

## Method Blank (1508043-BLK2)

Dilution Factor: 5

Prepared &amp; Analyzed: 08/10/15

|            |         |      |      |
|------------|---------|------|------|
| Vanadium   | < 10.0  | 15.0 | ug/L |
| Chromium   | < 5.00  | 10.0 | "    |
| Cobalt     | < 0.500 | 1.00 | "    |
| Nickel     | < 2.50  | 5.00 | "    |
| Copper     | < 2.50  | 5.00 | "    |
| Arsenic    | < 2.50  | 10.0 | "    |
| Selenium   | < 5.00  | 10.0 | "    |
| Molybdenum | < 5.00  | 5.00 | "    |
| Silver     | < 2.50  | 5.00 | "    |
| Cadmium    | < 0.500 | 1.00 | "    |
| Antimony   | < 2.50  | 5.00 | "    |
| Barium     | < 25.0  | 50.0 | "    |
| Thallium   | < 2.50  | 5.00 | "    |
| Lead       | < 0.500 | 1.00 | "    |

## Duplicate (1508043-DUP2)

Dilution Factor: 5

Source: C150802-22

Prepared &amp; Analyzed: 08/10/15

|            |         |      |      |         |        |
|------------|---------|------|------|---------|--------|
| Vanadium   | < 10.0  | 15.0 | ug/L | < 10.0  | 20     |
| Chromium   | < 5.00  | 10.0 | "    | < 5.00  | 20     |
| Cobalt     | < 0.500 | 1.00 | "    | < 0.500 | 20     |
| Nickel     | < 2.50  | 5.00 | "    | < 2.50  | 20     |
| Copper     | 14.81   | 5.00 | "    | 13.84   | 7 20   |
| Arsenic    | 2.770   | 10.0 | "    | < 2.50  | 20     |
| Selenium   | < 5.00  | 10.0 | "    | < 5.00  | 20     |
| Molybdenum | < 5.00  | 5.00 | "    | < 5.00  | 20     |
| Silver     | < 2.50  | 5.00 | "    | < 2.50  | 20     |
| Cadmium    | < 0.500 | 1.00 | "    | < 0.500 | 20     |
| Antimony   | < 2.50  | 5.00 | "    | < 2.50  | 20     |
| Barium     | 48.24   | 50.0 | "    | 47.93   | 0.6 20 |
| Thallium   | < 2.50  | 5.00 | "    | < 2.50  | 20     |
| Lead       | 42.72   | 1.00 | "    | 34.14   | 22 20  |

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Certificate of Analysis

TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | %R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|

Batch 1508043 - 200.2 - TR Metals

Water

ICPMS-PE DRC-II

Matrix Spike (1508043-MS2)

Dilution Factor: 5

Source: C150802-22

Prepared &amp; Analyzed: 08/10/15

|            |       |      |      |      |         |    |        |  |  |
|------------|-------|------|------|------|---------|----|--------|--|--|
| Vanadium   | 276.7 | 15.0 | ug/L | 300  | < 10.0  | 92 | 70-130 |  |  |
| Chromium   | 367.0 | 10.0 | "    | 400  | < 5.00  | 92 | 70-130 |  |  |
| Cobalt     | 186.1 | 1.00 | "    | 200  | < 0.500 | 93 | 70-130 |  |  |
| Nickel     | 455.9 | 5.00 | "    | 500  | < 2.50  | 91 | 70-130 |  |  |
| Copper     | 285.6 | 5.00 | "    | 300  | 13.84   | 91 | 70-130 |  |  |
| Arsenic    | 765.2 | 10.0 | "    | 800  | < 2.50  | 96 | 70-130 |  |  |
| Selenium   | 1926  | 10.0 | "    | 2000 | < 5.00  | 96 | 70-130 |  |  |
| Molybdenum | 394.3 | 5.00 | "    | 400  | < 5.00  | 99 | 70-130 |  |  |
| Silver     | 72.21 | 5.00 | "    | 75.0 | < 2.50  | 96 | 70-130 |  |  |
| Cadmium    | 197.2 | 1.00 | "    | 200  | < 0.500 | 99 | 70-130 |  |  |
| Antimony   | 774.7 | 5.00 | "    | 800  | < 2.50  | 97 | 70-130 |  |  |
| Barium     | 231.1 | 50.0 | "    | 200  | 47.93   | 92 | 70-130 |  |  |
| Thallium   | 1904  | 5.00 | "    | 2000 | < 2.50  | 95 | 70-130 |  |  |
| Lead       | 1016  | 1.00 | "    | 1000 | 34.14   | 98 | 70-130 |  |  |

Matrix Spike (1508043-MS4)

Dilution Factor: 5

Source: C150802-25

Prepared &amp; Analyzed: 08/10/15

|            |       |      |      |      |         |    |        |  |  |
|------------|-------|------|------|------|---------|----|--------|--|--|
| Vanadium   | 272.8 | 15.0 | ug/L | 300  | < 10.0  | 91 | 70-130 |  |  |
| Chromium   | 353.2 | 10.0 | "    | 400  | < 5.00  | 88 | 70-130 |  |  |
| Cobalt     | 179.5 | 1.00 | "    | 200  | < 0.500 | 90 | 70-130 |  |  |
| Nickel     | 443.2 | 5.00 | "    | 500  | < 2.50  | 89 | 70-130 |  |  |
| Copper     | 281.2 | 5.00 | "    | 300  | 9.126   | 91 | 70-130 |  |  |
| Arsenic    | 747.4 | 10.0 | "    | 800  | 2.678   | 93 | 70-130 |  |  |
| Selenium   | 1901  | 10.0 | "    | 2000 | < 5.00  | 95 | 70-130 |  |  |
| Molybdenum | 381.1 | 5.00 | "    | 400  | < 5.00  | 95 | 70-130 |  |  |
| Silver     | 69.01 | 5.00 | "    | 75.0 | < 2.50  | 92 | 70-130 |  |  |
| Cadmium    | 190.0 | 1.00 | "    | 200  | < 0.500 | 95 | 70-130 |  |  |
| Antimony   | 760.2 | 5.00 | "    | 800  | < 2.50  | 95 | 70-130 |  |  |
| Barium     | 225.0 | 50.0 | "    | 200  | 43.27   | 91 | 70-130 |  |  |
| Thallium   | 1831  | 5.00 | "    | 2000 | 11.93   | 91 | 70-130 |  |  |
| Lead       | 962.4 | 1.00 | "    | 1000 | 19.70   | 94 | 70-130 |  |  |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

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TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | %R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|

Batch 1508043 - 200.2 - TR Metals

Water

ICPMS-PE DRC-II

Reference (1508043-SRM2)

Dilution Factor: 2

Prepared &amp; Analyzed: 08/10/15

|            |       |      |      |      |  |    |        |  |  |
|------------|-------|------|------|------|--|----|--------|--|--|
| Vanadium   | 914.3 | 60.0 | ug/L | 1000 |  | 91 | 85-115 |  |  |
| Chromium   | 919.2 | 40.0 | "    | 1000 |  | 92 | 85-115 |  |  |
| Cobalt     | 940.3 | 4.00 | "    | 1000 |  | 94 | 85-115 |  |  |
| Nickel     | 916.7 | 20.0 | "    | 1000 |  | 92 | 85-115 |  |  |
| Copper     | 941.9 | 20.0 | "    | 1000 |  | 94 | 85-115 |  |  |
| Arsenic    | 1942  | 40.0 | "    | 2000 |  | 97 | 85-115 |  |  |
| Selenium   | 897.2 | 40.0 | "    | 1000 |  | 90 | 85-115 |  |  |
| Molybdenum | 958.8 | 20.0 | "    | 1000 |  | 96 | 85-115 |  |  |
| Silver     | 235.5 | 20.0 | "    | 250  |  | 94 | 85-115 |  |  |
| Cadmium    | 991.7 | 4.00 | "    | 1000 |  | 99 | 85-115 |  |  |
| Antimony   | 1923  | 20.0 | "    | 2000 |  | 96 | 85-115 |  |  |
| Barium     | 923.2 | 200  | "    | 1000 |  | 92 | 85-115 |  |  |
| Thallium   | 4646  | 20.0 | "    | 5000 |  | 93 | 85-115 |  |  |
| Lead       | 1889  | 4.00 | "    | 2000 |  | 94 | 85-115 |  |  |

Batch 1508046 - 200.2 - TR Metals

Water

ICPMS-PE DRC-II

Method Blank (1508046-BLK2)

Dilution Factor: 5

Prepared &amp; Analyzed: 08/10/15

|            |         |      |      |  |  |  |  |  |  |
|------------|---------|------|------|--|--|--|--|--|--|
| Vanadium   | < 10.0  | 15.0 | ug/L |  |  |  |  |  |  |
| Chromium   | < 5.00  | 10.0 | "    |  |  |  |  |  |  |
| Cobalt     | < 0.500 | 1.00 | "    |  |  |  |  |  |  |
| Nickel     | < 2.50  | 5.00 | "    |  |  |  |  |  |  |
| Copper     | < 2.50  | 5.00 | "    |  |  |  |  |  |  |
| Arsenic    | < 2.50  | 10.0 | "    |  |  |  |  |  |  |
| Selenium   | < 5.00  | 10.0 | "    |  |  |  |  |  |  |
| Molybdenum | < 5.00  | 5.00 | "    |  |  |  |  |  |  |
| Silver     | < 2.50  | 5.00 | "    |  |  |  |  |  |  |
| Cadmium    | < 0.500 | 1.00 | "    |  |  |  |  |  |  |
| Antimony   | < 2.50  | 5.00 | "    |  |  |  |  |  |  |
| Barium     | < 25.0  | 50.0 | "    |  |  |  |  |  |  |
| Thallium   | < 2.50  | 5.00 | "    |  |  |  |  |  |  |
| Lead       | < 0.500 | 1.00 | "    |  |  |  |  |  |  |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                           | Result  | Det. Limit         | Units | Spike Level        | Source Result | % R                           | % R Limits      | % D or RPD | % D or RPD Limit |
|-----------------------------------|---------|--------------------|-------|--------------------|---------------|-------------------------------|-----------------|------------|------------------|
| Batch 1508046 - 200.2 - TR Metals |         |                    | Water |                    |               |                               | ICPMS-PE DRC-II |            |                  |
| Duplicate (1508046-DUP2)          |         | Dilution Factor: 5 |       | Source: C150802-40 |               | Prepared & Analyzed: 08/10/15 |                 |            |                  |
| Vanadium                          | < 10.0  | 15.0               | ug/L  |                    | < 10.0        |                               |                 |            | 20               |
| Chromium                          | < 5.00  | 10.0               | "     |                    | < 5.00        |                               |                 |            | 20               |
| Cobalt                            | 0.5506  | 1.00               | "     |                    | 0.6074        |                               |                 | 10         | 20               |
| Nickel                            | < 2.50  | 5.00               | "     |                    | < 2.50        |                               |                 |            | 20               |
| Copper                            | 16.22   | 5.00               | "     |                    | 15.81         |                               |                 | 3          | 20               |
| Arsenic                           | 3.860   | 10.0               | "     |                    | < 2.50        |                               |                 |            | 20               |
| Selenium                          | < 5.00  | 10.0               | "     |                    | < 5.00        |                               |                 |            | 20               |
| Molybdenum                        | < 5.00  | 5.00               | "     |                    | < 5.00        |                               |                 |            | 20               |
| Silver                            | < 2.50  | 5.00               | "     |                    | < 2.50        |                               |                 |            | 20               |
| Cadmium                           | < 0.500 | 1.00               | "     |                    | < 0.500       |                               |                 |            | 20               |
| Antimony                          | < 2.50  | 5.00               | "     |                    | < 2.50        |                               |                 |            | 20               |
| Barium                            | 45.27   | 50.0               | "     |                    | 44.12         |                               |                 | 3          | 20               |
| Thallium                          | < 2.50  | 5.00               | "     |                    | < 2.50        |                               |                 |            | 20               |
| Lead                              | 38.59   | 1.00               | "     |                    | 37.64         |                               |                 | 2          | 20               |
| Matrix Spike (1508046-MS2)        |         | Dilution Factor: 5 |       | Source: C150802-40 |               | Prepared & Analyzed: 08/10/15 |                 |            |                  |
| Vanadium                          | 282.0   | 15.0               | ug/L  | 300                | < 10.0        | 94                            | 70-130          |            |                  |
| Chromium                          | 361.1   | 10.0               | "     | 400                | < 5.00        | 90                            | 70-130          |            |                  |
| Cobalt                            | 187.7   | 1.00               | "     | 200                | 0.6074        | 94                            | 70-130          |            |                  |
| Nickel                            | 455.1   | 5.00               | "     | 500                | < 2.50        | 91                            | 70-130          |            |                  |
| Copper                            | 294.6   | 5.00               | "     | 300                | 15.81         | 93                            | 70-130          |            |                  |
| Arsenic                           | 756.4   | 10.0               | "     | 800                | < 2.50        | 95                            | 70-130          |            |                  |
| Selenium                          | 1915    | 10.0               | "     | 2000               | < 5.00        | 96                            | 70-130          |            |                  |
| Molybdenum                        | 385.1   | 5.00               | "     | 400                | < 5.00        | 96                            | 70-130          |            |                  |
| Silver                            | 70.32   | 5.00               | "     | 75.0               | < 2.50        | 94                            | 70-130          |            |                  |
| Cadmium                           | 194.4   | 1.00               | "     | 200                | < 0.500       | 97                            | 70-130          |            |                  |
| Antimony                          | 760.6   | 5.00               | "     | 800                | < 2.50        | 95                            | 70-130          |            |                  |
| Barium                            | 220.8   | 50.0               | "     | 200                | 44.12         | 88                            | 70-130          |            |                  |
| Thallium                          | 1810    | 5.00               | "     | 2000               | < 2.50        | 90                            | 70-130          |            |                  |
| Lead                              | 973.2   | 1.00               | "     | 1000               | 37.64         | 94                            | 70-130          |            |                  |

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Certificate of Analysis

TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte | Result | Det. Limit | Units | Spike Level | Source Result | %R | % R Limits | % D or RPD | % D or RPD Limit |
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|
|---------|--------|------------|-------|-------------|---------------|----|------------|------------|------------------|

Batch 1508046 - 200.2 - TR Metals

Water

ICPMS-PE DRC-II

Reference (1508046-SRM2)

Dilution Factor: 2

Prepared &amp; Analyzed: 08/10/15

|            |       |      |      |      |  |    |        |  |  |
|------------|-------|------|------|------|--|----|--------|--|--|
| Vanadium   | 931.2 | 60.0 | ug/L | 1000 |  | 93 | 85-115 |  |  |
| Chromium   | 916.3 | 40.0 | "    | 1000 |  | 92 | 85-115 |  |  |
| Cobalt     | 950.9 | 4.00 | "    | 1000 |  | 95 | 85-115 |  |  |
| Nickel     | 930.5 | 20.0 | "    | 1000 |  | 93 | 85-115 |  |  |
| Copper     | 934.2 | 20.0 | "    | 1000 |  | 93 | 85-115 |  |  |
| Arsenic    | 1941  | 40.0 | "    | 2000 |  | 97 | 85-115 |  |  |
| Selenium   | 961.8 | 40.0 | "    | 1000 |  | 96 | 85-115 |  |  |
| Molybdenum | 953.9 | 20.0 | "    | 1000 |  | 95 | 85-115 |  |  |
| Silver     | 237.3 | 20.0 | "    | 250  |  | 95 | 85-115 |  |  |
| Cadmium    | 963.7 | 4.00 | "    | 1000 |  | 96 | 85-115 |  |  |
| Antimony   | 1901  | 20.0 | "    | 2000 |  | 95 | 85-115 |  |  |
| Barium     | 916.4 | 200  | "    | 1000 |  | 92 | 85-115 |  |  |
| Thallium   | 4568  | 20.0 | "    | 5000 |  | 91 | 85-115 |  |  |
| Lead       | 1880  | 4.00 | "    | 2000 |  | 94 | 85-115 |  |  |

Batch 1508057 - 1508046

Water

ICPMS-PE DRC-II

Serial Dilution (1508057-SRD1)

Dilution Factor: 2

Source: C150802-22

Prepared &amp; Analyzed: 08/10/15

|            |        |      |      |         |  |  |     |  |     |
|------------|--------|------|------|---------|--|--|-----|--|-----|
| Vanadium   | < 50.0 | 75.0 | ug/L | < 10.00 |  |  |     |  | 10  |
| Chromium   | < 25.0 | 50.0 | "    | < 5.00  |  |  |     |  | 10  |
| Cobalt     | < 2.50 | 5.00 | "    | < 0.50  |  |  |     |  | 10  |
| Nickel     | < 12.5 | 25.0 | "    | < 2.50  |  |  |     |  | 10  |
| Copper     | 12.68  | 25.0 | "    | 13.84   |  |  | 9   |  | 10  |
| Arsenic    | < 12.5 | 50.0 | "    | < 2.50  |  |  |     |  | 10  |
| Selenium   | < 25.0 | 50.0 | "    | < 5.00  |  |  |     |  | 10  |
| Molybdenum | < 25.0 | 25.0 | "    | < 5.00  |  |  |     |  | 200 |
| Silver     | < 12.5 | 25.0 | "    | < 2.50  |  |  |     |  | 10  |
| Cadmium    | < 2.50 | 5.00 | "    | < 0.50  |  |  |     |  | 10  |
| Antimony   | < 12.5 | 25.0 | "    | < 2.50  |  |  |     |  | 10  |
| Barium     | < 125  | 250  | "    | 47.93   |  |  |     |  | 10  |
| Thallium   | < 12.5 | 25.0 | "    | < 2.50  |  |  |     |  | 10  |
| Lead       | 34.27  | 5.00 | "    | 34.14   |  |  | 0.4 |  | 10  |

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TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                        | Result | Det. Limit         | Units | Spike Level        | Source Result | % R                           | % R Limits      | % D or RPD | % D or RPD Limit |
|--------------------------------|--------|--------------------|-------|--------------------|---------------|-------------------------------|-----------------|------------|------------------|
| Batch 1508057 - 1508046        |        |                    | Water |                    |               |                               | ICPMS-PE DRC-II |            |                  |
| Serial Dilution (1508057-SRD2) |        | Dilution Factor: 2 |       | Source: C150802-40 |               | Prepared & Analyzed: 08/10/15 |                 |            |                  |
| Vanadium                       | < 50.0 | 75.0               | ug/L  |                    | < 10.00       |                               |                 |            | 10               |
| Chromium                       | < 25.0 | 50.0               | "     |                    | < 5.00        |                               |                 |            | 10               |
| Cobalt                         | < 2.50 | 5.00               | "     |                    | 0.6074        |                               |                 |            | 10               |
| Nickel                         | < 12.5 | 25.0               | "     |                    | < 2.50        |                               |                 |            | 10               |
| Copper                         | 18.52  | 25.0               | "     |                    | 15.81         |                               |                 | 16         | 10               |
| Arsenic                        | < 12.5 | 50.0               | "     |                    | < 2.50        |                               |                 |            | 10               |
| Selenium                       | < 25.0 | 50.0               | "     |                    | < 5.00        |                               |                 |            | 10               |
| Molybdenum                     | < 25.0 | 25.0               | "     |                    | < 5.00        |                               |                 |            | 200              |
| Silver                         | < 12.5 | 25.0               | "     |                    | < 2.50        |                               |                 |            | 10               |
| Cadmium                        | < 2.50 | 5.00               | "     |                    | < 0.50        |                               |                 |            | 10               |
| Antimony                       | < 12.5 | 25.0               | "     |                    | < 2.50        |                               |                 |            | 10               |
| Barium                         | < 125  | 250                | "     |                    | 44.12         |                               |                 |            | 10               |
| Thallium                       | < 12.5 | 25.0               | "     |                    | < 2.50        |                               |                 |            | 10               |
| Lead                           | 35.25  | 5.00               | "     |                    | 37.64         |                               |                 | 7          | 10               |

## ICPOE - PE Optima

| Batch 1508043 - 200.2 - TR Metals |        |                    | Water | ICPOE - PE Optima             |
|-----------------------------------|--------|--------------------|-------|-------------------------------|
| Method Blank (1508043-BLK1)       |        | Dilution Factor: 1 |       | Prepared & Analyzed: 08/10/15 |
| Aluminum                          | < 20.0 | 50.0               | ug/L  |                               |
| Beryllium                         | < 2.00 | 5.00               | "     |                               |
| Calcium                           | < 100  | 250                | "     |                               |
| Iron                              | < 100  | 250                | "     |                               |
| Potassium                         | < 250  | 1000               | "     |                               |
| Magnesium                         | < 100  | 250                | "     |                               |
| Manganese                         | < 2.00 | 5.00               | "     |                               |
| Sodium                            | < 250  | 1000               | "     |                               |
| Zinc                              | < 10.0 | 20.0               | "     |                               |

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TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                           | Result | Det. Limit         | Units              | Spike Level | Source Result | %R                            | %R Limits         | %D or RPD | %D or RPD Limit |
|-----------------------------------|--------|--------------------|--------------------|-------------|---------------|-------------------------------|-------------------|-----------|-----------------|
| Batch 1508043 - 200.2 - TR Metals |        |                    | Water              |             |               |                               | ICPOE - PE Optima |           |                 |
| Duplicate (1508043-DUP1)          |        | Dilution Factor: 1 | Source: C150802-22 |             |               | Prepared & Analyzed: 08/10/15 |                   |           |                 |
| Aluminum                          | 888.5  | 50.0               | ug/L               |             | 810.6         |                               |                   | 9         | 20              |
| Beryllium                         | < 2.00 | 5.00               | "                  |             | < 2.00        |                               |                   |           | 20              |
| Calcium                           | 54460  | 250                | "                  |             | 55210         |                               |                   | 1         | 20              |
| Iron                              | 3096   | 250                | "                  |             | 2925          |                               |                   | 6         | 20              |
| Potassium                         | 2217   | 1000               | "                  |             | 2255          |                               |                   | 2         | 20              |
| Magnesium                         | 7739   | 250                | "                  |             | 7940          |                               |                   | 3         | 20              |
| Manganese                         | 163.9  | 5.00               | "                  |             | 150.6         |                               |                   | 8         | 20              |
| Sodium                            | 10760  | 1000               | "                  |             | 10870         |                               |                   | 0.9       | 20              |
| Zinc                              | 94.79  | 20.0               | "                  |             | 91.53         |                               |                   | 3         | 20              |
| Matrix Spike (1508043-MS1)        |        | Dilution Factor: 1 | Source: C150802-22 |             |               | Prepared & Analyzed: 08/10/15 |                   |           |                 |
| Aluminum                          | 2967   | 50.0               | ug/L               | 2000        | 810.6         | 108                           | 70-130            |           |                 |
| Beryllium                         | 203.4  | 5.00               | "                  | 200         | < 2.00        | 102                           | 70-130            |           |                 |
| Calcium                           | 55820  | 250                | "                  | 1000        | 55210         | 61                            | 70-130            |           |                 |
| Iron                              | 6180   | 250                | "                  | 3000        | 2925          | 108                           | 70-130            |           |                 |
| Potassium                         | 12240  | 1000               | "                  | 10000       | 2255          | 100                           | 70-130            |           |                 |
| Magnesium                         | 9855   | 250                | "                  | 2000        | 7940          | 96                            | 70-130            |           |                 |
| Manganese                         | 359.2  | 5.00               | "                  | 200         | 150.6         | 104                           | 70-130            |           |                 |
| Sodium                            | 13720  | 1000               | "                  | 3000        | 10870         | 95                            | 70-130            |           |                 |
| Zinc                              | 294.0  | 20.0               | "                  | 200         | 91.53         | 101                           | 70-130            |           |                 |
| Matrix Spike (1508043-MS3)        |        | Dilution Factor: 1 | Source: C150802-25 |             |               | Prepared & Analyzed: 08/10/15 |                   |           |                 |
| Aluminum                          | 2507   | 50.0               | ug/L               | 2000        | 496.7         | 101                           | 70-130            |           |                 |
| Beryllium                         | 202.2  | 5.00               | "                  | 200         | < 2.00        | 101                           | 70-130            |           |                 |
| Calcium                           | 52110  | 250                | "                  | 1000        | 51600         | 51                            | 70-130            |           |                 |
| Iron                              | 4508   | 250                | "                  | 3000        | 1409          | 103                           | 70-130            |           |                 |
| Potassium                         | 11740  | 1000               | "                  | 10000       | 1938          | 98                            | 70-130            |           |                 |
| Magnesium                         | 9330   | 250                | "                  | 2000        | 7363          | 98                            | 70-130            |           |                 |
| Manganese                         | 321.0  | 5.00               | "                  | 200         | 120.8         | 100                           | 70-130            |           |                 |
| Sodium                            | 12750  | 1000               | "                  | 3000        | 9933          | 94                            | 70-130            |           |                 |
| Zinc                              | 267.6  | 20.0               | "                  | 200         | 66.75         | 100                           | 70-130            |           |                 |

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TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                           | Result | Det. Limit         | Units | Spike Level        | Source Result | % R                           | % R Limits        | % D or RPD | % D or RPD Limit |
|-----------------------------------|--------|--------------------|-------|--------------------|---------------|-------------------------------|-------------------|------------|------------------|
| Batch 1508043 - 200.2 - TR Metals |        |                    | Water |                    |               |                               | ICPOE - PE Optima |            |                  |
| Reference (1508043-SRM1)          |        | Dilution Factor: 1 |       |                    |               | Prepared & Analyzed: 08/10/15 |                   |            |                  |
| Aluminum                          | 1027   | 50.0               | ug/L  | 1000               |               | 103                           | 85-115            |            |                  |
| Beryllium                         | 1007   | 5.00               | "     | 1000               |               | 101                           | 85-115            |            |                  |
| Calcium                           | 1002   | 250                | "     | 1000               |               | 100                           | 85-115            |            |                  |
| Iron                              | 1009   | 250                | "     | 1000               |               | 101                           | 85-115            |            |                  |
| Potassium                         | 5097   | 1000               | "     | 5000               |               | 102                           | 85-115            |            |                  |
| Magnesium                         | 1007   | 250                | "     | 1000               |               | 101                           | 85-115            |            |                  |
| Manganese                         | 1030   | 5.00               | "     | 1000               |               | 103                           | 85-115            |            |                  |
| Sodium                            | 1039   | 1000               | "     | 1000               |               | 104                           | 85-115            |            |                  |
| Zinc                              | 1032   | 20.0               | "     | 1000               |               | 103                           | 85-115            |            |                  |
| Batch 1508046 - 200.2 - TR Metals |        |                    | Water |                    |               |                               | ICPOE - PE Optima |            |                  |
| Method Blank (1508046-BLK1)       |        | Dilution Factor: 1 |       |                    |               | Prepared & Analyzed: 08/10/15 |                   |            |                  |
| Aluminum                          | < 20.0 | 50.0               | ug/L  |                    |               |                               |                   |            |                  |
| Beryllium                         | < 2.00 | 5.00               | "     |                    |               |                               |                   |            |                  |
| Calcium                           | < 100  | 250                | "     |                    |               |                               |                   |            |                  |
| Iron                              | < 100  | 250                | "     |                    |               |                               |                   |            |                  |
| Potassium                         | < 250  | 1000               | "     |                    |               |                               |                   |            |                  |
| Magnesium                         | < 100  | 250                | "     |                    |               |                               |                   |            |                  |
| Manganese                         | < 2.00 | 5.00               | "     |                    |               |                               |                   |            |                  |
| Sodium                            | < 250  | 1000               | "     |                    |               |                               |                   |            |                  |
| Zinc                              | < 10.0 | 20.0               | "     |                    |               |                               |                   |            |                  |
| Duplicate (1508046-DUP1)          |        | Dilution Factor: 1 |       | Source: C150802-40 |               | Prepared & Analyzed: 08/10/15 |                   |            |                  |
| Aluminum                          | 876.7  | 50.0               | ug/L  |                    | 803.4         |                               |                   | 9          | 20               |
| Beryllium                         | < 2.00 | 5.00               | "     |                    | < 2.00        |                               |                   |            | 20               |
| Calcium                           | 52100  | 250                | "     |                    | 50060         |                               |                   | 4          | 20               |
| Iron                              | 3024   | 250                | "     |                    | 2916          |                               |                   | 4          | 20               |
| Potassium                         | 2097   | 1000               | "     |                    | 1989          |                               |                   | 5          | 20               |
| Magnesium                         | 7278   | 250                | "     |                    | 6954          |                               |                   | 5          | 20               |
| Manganese                         | 183.6  | 5.00               | "     |                    | 186.1         |                               |                   | 1          | 20               |
| Sodium                            | 10190  | 1000               | "     |                    | 9693          |                               |                   | 5          | 20               |
| Zinc                              | 120.6  | 20.0               | "     |                    | 124.4         |                               |                   | 3          | 20               |

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TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                           | Result | Det. Limit         | Units | Spike Level        | Source Result | % R                           | % R Limits        | % D or RPD | % D or RPD Limit |
|-----------------------------------|--------|--------------------|-------|--------------------|---------------|-------------------------------|-------------------|------------|------------------|
| Batch 1508046 - 200.2 - TR Metals |        |                    | Water |                    |               |                               | ICPOE - PE Optima |            |                  |
| Matrix Spike (1508046-MS1)        |        | Dilution Factor: 1 |       | Source: C150802-40 |               | Prepared & Analyzed: 08/10/15 |                   |            |                  |
| Aluminum                          | 2957   | 50.0               | ug/L  | 2000               | 803.4         | 108                           | 70-130            |            |                  |
| Beryllium                         | 197.0  | 5.00               | "     | 200                | < 2.00        | 99                            | 70-130            |            |                  |
| Calcium                           | 53820  | 250                | "     | 1000               | 50060         | 377                           | 70-130            |            |                  |
| Iron                              | 6181   | 250                | "     | 3000               | 2916          | 109                           | 70-130            |            |                  |
| Potassium                         | 12130  | 1000               | "     | 10000              | 1989          | 101                           | 70-130            |            |                  |
| Magnesium                         | 9486   | 250                | "     | 2000               | 6954          | 127                           | 70-130            |            |                  |
| Manganese                         | 382.6  | 5.00               | "     | 200                | 186.1         | 98                            | 70-130            |            |                  |
| Sodium                            | 13320  | 1000               | "     | 3000               | 9693          | 121                           | 70-130            |            |                  |
| Zinc                              | 313.2  | 20.0               | "     | 200                | 124.4         | 94                            | 70-130            |            |                  |
| Reference (1508046-SRM1)          |        | Dilution Factor: 1 |       |                    |               | Prepared & Analyzed: 08/10/15 |                   |            |                  |
| Aluminum                          | 1004   | 50.0               | ug/L  | 1000               |               | 100                           | 85-115            |            |                  |
| Beryllium                         | 987.6  | 5.00               | "     | 1000               |               | 99                            | 85-115            |            |                  |
| Calcium                           | 976.9  | 250                | "     | 1000               |               | 98                            | 85-115            |            |                  |
| Iron                              | 987.5  | 250                | "     | 1000               |               | 99                            | 85-115            |            |                  |
| Potassium                         | 4914   | 1000               | "     | 5000               |               | 98                            | 85-115            |            |                  |
| Magnesium                         | 982.9  | 250                | "     | 1000               |               | 98                            | 85-115            |            |                  |
| Manganese                         | 1015   | 5.00               | "     | 1000               |               | 101                           | 85-115            |            |                  |
| Sodium                            | 995.4  | 1000               | "     | 1000               |               | 100                           | 85-115            |            |                  |
| Zinc                              | 1016   | 20.0               | "     | 1000               |               | 102                           | 85-115            |            |                  |
| Batch 1508056 - 1508046           |        |                    | Water |                    |               |                               | ICPOE - PE Optima |            |                  |
| Serial Dilution (1508056-SRD1)    |        | Dilution Factor: 5 |       | Source: C150802-22 |               | Prepared & Analyzed: 08/10/15 |                   |            |                  |
| Aluminum                          | 849.0  | 250                | ug/L  |                    | 810.6         |                               |                   | 5          | 10               |
| Beryllium                         | < 10.0 | 25.0               | "     |                    | < 2.00        |                               |                   |            | 10               |
| Calcium                           | 53600  | 1250               | "     |                    | 55210         |                               |                   | 3          | 10               |
| Iron                              | 2852   | 1250               | "     |                    | 2925          |                               |                   | 3          | 10               |
| Potassium                         | 2501   | 5000               | "     |                    | 2255          |                               |                   | 10         | 10               |
| Magnesium                         | 7741   | 1250               | "     |                    | 7940          |                               |                   | 3          | 10               |
| Manganese                         | 155.0  | 25.0               | "     |                    | 150.6         |                               |                   | 3          | 10               |
| Sodium                            | 10630  | 5000               | "     |                    | 10870         |                               |                   | 2          | 10               |
| Zinc                              | 99.46  | 100                | "     |                    | 91.53         |                               |                   | 8          | 10               |

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Certificate of Analysis

TDF #: [none]

Metals (Total Recov) by EPA 200/7000 Series Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                        | Result | Det. Limit         | Units | Spike Level        | Source Result | %R                            | %R Limits         | %D or RPD | %D or RPD Limit |
|--------------------------------|--------|--------------------|-------|--------------------|---------------|-------------------------------|-------------------|-----------|-----------------|
| Batch 1508056 - 1508046        |        |                    | Water |                    |               |                               | ICPOE - PE Optima |           |                 |
| Serial Dilution (1508056-SRD2) |        | Dilution Factor: 5 |       | Source: C150802-40 |               | Prepared & Analyzed: 08/10/15 |                   |           |                 |
| Aluminum                       | 836.9  | 250                | ug/L  |                    | 803.4         |                               |                   | 4         | 10              |
| Beryllium                      | < 10.0 | 25.0               | "     |                    | < 2.00        |                               |                   |           | 10              |
| Calcium                        | 51120  | 1250               | "     |                    | 50060         |                               |                   | 2         | 10              |
| Iron                           | 3069   | 1250               | "     |                    | 2916          |                               |                   | 5         | 10              |
| Potassium                      | 2268   | 5000               | "     |                    | 1989          |                               |                   | 13        | 10              |
| Magnesium                      | 7174   | 1250               | "     |                    | 6954          |                               |                   | 3         | 10              |
| Manganese                      | 182.0  | 25.0               | "     |                    | 186.1         |                               |                   | 2         | 10              |
| Sodium                         | 10040  | 5000               | "     |                    | 9693          |                               |                   | 4         | 10              |
| Zinc                           | 130.0  | 100                | "     |                    | 124.4         |                               |                   | 4         | 10              |

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.  
RPD = Relative Percent Difference %D = % Difference. DL = Detection Limit for QC sample

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Certificate of Analysis

TDF #: [none]

Mercury only (Total) by EPA 245.1 / 7470A Method - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                              | Result   | Det. Limit         | Units | Spike Level        | Source Result | % R                           | % R Limits     | % D or RPD | % D or RPD Limit |
|--------------------------------------|----------|--------------------|-------|--------------------|---------------|-------------------------------|----------------|------------|------------------|
| CVAA FIMS - PE                       |          |                    |       |                    |               |                               |                |            |                  |
| Batch 1508045 - EPA 245.1/245.2 Prep |          |                    | Water |                    |               |                               | CVAA FIMS - PE |            |                  |
| Method Blank (1508045-BLK1)          |          | Dilution Factor: 1 |       |                    |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | < 0.0500 | 0.100              | ug/L  |                    |               |                               |                |            |                  |
| Method Blank (1508045-BLK2)          |          | Dilution Factor: 1 |       |                    |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | < 0.0500 | 0.100              | ug/L  |                    |               |                               |                |            |                  |
| Method Blank Spike (1508045-BS1)     |          | Dilution Factor: 1 |       |                    |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | 7.36     | 0.100              | ug/L  | 7.50               |               | 98                            | 85-115         |            |                  |
| Method Blank Spike (1508045-BS2)     |          | Dilution Factor: 1 |       |                    |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | 7.55     | 0.100              | ug/L  | 7.50               |               | 101                           | 85-115         |            |                  |
| Duplicate (1508045-DUP1)             |          | Dilution Factor: 1 |       | Source: C150802-01 |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | 0.157    | 0.100              | ug/L  |                    | 0.149         |                               |                | 5          | 20               |
| Duplicate (1508045-DUP2)             |          | Dilution Factor: 1 |       | Source: C150802-61 |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | < 0.0500 | 0.100              | ug/L  |                    | < 0.0500      |                               |                |            | 20               |
| Matrix Spike (1508045-MS1)           |          | Dilution Factor: 1 |       | Source: C150802-01 |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | 2.78     | 0.100              | ug/L  | 7.50               | 0.149         | 35                            | 75-125         |            |                  |
| Matrix Spike (1508045-MS2)           |          | Dilution Factor: 1 |       | Source: C150802-31 |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | 7.44     | 0.100              | ug/L  | 7.50               | < 0.0500      | 99                            | 75-125         |            |                  |
| Matrix Spike (1508045-MS3)           |          | Dilution Factor: 1 |       | Source: C150802-61 |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | 7.90     | 0.100              | ug/L  | 7.50               | < 0.0500      | 105                           | 75-125         |            |                  |
| Batch 1508050 - 1508045              |          |                    | Water |                    |               |                               | CVAA FIMS - PE |            |                  |
| Instrument Blank (1508050-IBL1)      |          | Dilution Factor: 1 |       |                    |               | Prepared & Analyzed: 08/10/15 |                |            |                  |
| Mercury                              | < 0.0500 | 0.100              | ug/L  |                    |               |                               |                |            |                  |

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.  
 RPD = Relative Percent Difference %D = % Difference, DL = Detection Limit for QC sample



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Certificate of Analysis

TDF #: [none]

Classical Chemistry by EPA/ASTM/APHA Methods - Quality Control

TechLaw, Inc. - ESAT Region 8

| Analyte                     | Result | Det. Limit         | Units        | Spike Level        | Source Result | % R                           | % R Limits | % D or RPD | % D or RPD Limit |
|-----------------------------|--------|--------------------|--------------|--------------------|---------------|-------------------------------|------------|------------|------------------|
| Mettler AT                  |        |                    |              |                    |               |                               |            |            |                  |
| Batch 1508047 - No Prep Req |        |                    | Water        |                    |               |                               | Mettler AT |            |                  |
| Method Blank (1508047-BLK1) |        | Dilution Factor: 1 |              |                    |               | Prepared & Analyzed: 08/10/15 |            |            |                  |
| Total Alkalinity            | < 5.00 | 10.0               | mg CaCO3 / L |                    |               |                               |            |            |                  |
| Duplicate (1508047-DUP1)    |        | Dilution Factor: 1 |              | Source: C150802-66 |               | Prepared & Analyzed: 08/10/15 |            |            |                  |
| Total Alkalinity            | 76.9   | 10.0               | mg CaCO3 / L |                    | 76.7          |                               |            | 0.2        | 20               |
| Reference (1508047-SRM1)    |        | Dilution Factor: 1 |              |                    |               | Prepared & Analyzed: 08/10/15 |            |            |                  |
| Total Alkalinity            | 76.9   | 10.0               | mg CaCO3 / L | 78.1               |               | 99                            | 69.3-86.9  |            |                  |

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.  
RPD = Relative Percent Difference %D = % Difference, DL = Detection Limit for QC sample

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
**Initial and Continuing Calibration Blanks**

Analytical Method: EPA 310.1

Analysis Name: WC - Alkalinity

Instrument: Mettler AT

Work Order: Nu C150802

Analytical Sequence: **Total**

Concentration Units: mg CaCO3 / L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte          | Initial<br>Calibration<br>Blank (1 & 2) | Continuing Calibration Blanks |   |   |   | Method<br>Blank<br>(Batch ID) |    | PQL   |
|------------------|---|-------------------------------|---|---|---|-------------------------------|----|-------|
|                  |   | 1                             | 2 | 3 | 4 | 1508047-BLK1                  | NA |       |
| Total Alkalinity |   | 0.19                          |   |   |   | 0.00                          | NA | 10.00 |
|                  |   | 5                             | 6 | 7 | 8 |                               |    |       |
|                  |   |                               |   |   |   |                               |    |       |

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.7Analysis Name: ICPOE Diss. MetalsInstrument: ICPOE - PE OptimaWork Order: Nu C150802Analytical Sequence: 1508049 **Dissolved**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte   | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |       |       |       | Method Blank (Batch ID) |    | PQL    |
|-----------|-----------------------------------|-------------------------------|-------|-------|-------|-------------------------|----|--------|
| Aluminum  | 2.95                              | 1                             | 2     | 3     | 4     | 1508041-BLK1            | NA | 50.00  |
|           |                                   | -1.25                         | 2.33  | 2.73  | 0.59  | -1.91                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
|           | 2.95                              | 1                             | 2     | 3     | 4     | 1508038-BLK1            | NA | 50.00  |
|           |                                   | -1.25                         | 2.33  | 2.73  | 0.59  | 5.04                    | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
| Beryllium | 0.11                              | 1                             | 2     | 3     | 4     | 1508038-BLK1            | NA | 5.00   |
|           |                                   | 0.08                          | 0.05  | 0.07  | 0.09  | 0.00                    | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
|           | 0.11                              | 1                             | 2     | 3     | 4     | 1508041-BLK1            | NA | 5.00   |
|           |                                   | 0.08                          | 0.05  | 0.07  | 0.09  | -0.02                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
| Calcium   | 0.12                              | 1                             | 2     | 3     | 4     | 1508041-BLK1            | NA | 250.00 |
|           |                                   | 1.47                          | 1.53  | -0.35 | -1.12 | -6.96                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
|           | 0.12                              | 1                             | 2     | 3     | 4     | 1508038-BLK1            | NA | 250.00 |
|           |                                   | 1.47                          | 1.53  | -0.35 | -1.12 | 8.39                    | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
| Iron      | -4.48                             | 1                             | 2     | 3     | 4     | 1508041-BLK1            | NA | 250.00 |
|           |                                   | 44.06                         | 19.75 | 30.69 | 25.15 | 6.04                    | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
|           | -4.48                             | 1                             | 2     | 3     | 4     | 1508038-BLK1            | NA | 250.00 |
|           |                                   | 44.06                         | 19.75 | 30.69 | 25.15 | 44.17                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |

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TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.7Analysis Name: ICPOE Diss. MetalsInstrument: ICPOE - PE OptimaWork Order: Nu C150802Analytical Sequence: 1508049 **Dissolved**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte   | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |       |       |       | Method Blank (Batch ID) |    | PQL      |
|-----------|-----------------------------------|-------------------------------|-------|-------|-------|-------------------------|----|----------|
| Potassium | 36.93                             | 1                             | 2     | 3     | 4     | 1508038-BLK1            | NA | 1,000.00 |
|           |                                   | 39.32                         | 31.56 | 50.93 | 42.84 | 38.79                   | NA |          |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
|           | 36.93                             | 1                             | 2     | 3     | 4     | 1508041-BLK1            | NA | 1,000.00 |
|           |                                   | 39.32                         | 31.56 | 50.93 | 42.84 | 22.84                   | NA |          |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
| Magnesium | 0.85                              | 1                             | 2     | 3     | 4     | 1508041-BLK1            | NA | 250.00   |
|           |                                   | 3.21                          | 2.69  | 2.56  | 1.94  | -0.55                   | NA |          |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
|           | 0.85                              | 1                             | 2     | 3     | 4     | 1508038-BLK1            | NA | 250.00   |
|           |                                   | 3.21                          | 2.69  | 2.56  | 1.94  | 7.91                    | NA |          |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
| Manganese | 0.11                              | 1                             | 2     | 3     | 4     | 1508038-BLK1            | NA | 5.00     |
|           |                                   | 0.14                          | 0.11  | 0.10  | 0.12  | -0.05                   | NA |          |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
|           | 0.11                              | 1                             | 2     | 3     | 4     | 1508041-BLK1            | NA | 5.00     |
|           |                                   | 0.14                          | 0.11  | 0.10  | 0.12  | -0.04                   | NA |          |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
| Sodium    | 4.73                              | 1                             | 2     | 3     | 4     | 1508041-BLK1            | NA | 1,000.00 |
|           |                                   | 5.60                          | 6.85  | 7.81  | 6.52  | 4.00                    | NA |          |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
|           | 4.73                              | 1                             | 2     | 3     | 4     | 1508038-BLK1            | NA | 1,000.00 |
|           |                                   | 5.60                          | 6.85  | 7.81  | 6.52  | 5.87                    | NA |          |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |

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TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.7Analysis Name: ICPOE Diss. MetalsInstrument: ICPOE - PE OptimaWork Order: Nu C150802Analytical Sequence: 1508049 **Dissolved**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |      |      |      | Method Blank (Batch ID) |    | PQL   |
|---------|-----------------------------------|-------------------------------|------|------|------|-------------------------|----|-------|
| Zinc    | 1.35                              | 1                             | 2    | 3    | 4    | 1508041-BLK1            | NA | 20.00 |
|         |                                   | 0.53                          | 0.52 | 1.96 | 1.98 | 0.62                    | NA |       |
|         | 5                                 | 6                             | 7    | 8    |      |                         |    |       |
|         |                                   |                               |      |      |      |                         |    |       |
|         | 1.35                              | 1                             | 2    | 3    | 4    | 1508038-BLK1            | NA | 20.00 |
|         |                                   | 0.53                          | 0.52 | 1.96 | 1.98 | -0.47                   | NA |       |
|         | 5                                 | 6                             | 7    | 8    |      |                         |    |       |
|         |                                   |                               |      |      |      |                         |    |       |

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
INORGANIC ANALYSES DATA SHEET  
Intial and Continuing Calibration Blanks

Analytical Method: 245.1Analysis Name: TM Mercury 245.1Instrument: CVAA FIMS - PEWork Order: Nu C150802Analytical Sequence: 1508050 **Total**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |      |      |      | Method Blank (Batch ID) |              | PQL  |
|---------|-----------------------------------|-------------------------------|------|------|------|-------------------------|--------------|------|
| Mercury | 0.00                              | 1                             | 2    | 3    | 4    | 1508045-BLK1            | NA           | 0.10 |
|         |                                   | 0.00                          | 0.00 | 0.01 | 0.01 | 0.00                    | NA           |      |
|         |                                   | 5                             | 6    | 7    | 8    |                         |              |      |
|         |                                   |                               |      |      |      |                         |              |      |
|         | 0.00                              | 1                             | 2    | 3    | 4    | NA                      | 1508045-BLK2 | 0.10 |
|         |                                   | 0.00                          | 0.00 | 0.01 | 0.01 | NA                      | 0.00         |      |
|         |                                   | 5                             | 6    | 7    | 8    |                         |              |      |
|         |                                   |                               |      |      |      |                         |              |      |

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.8

Analysis Name: ICPMS Diss. Metals

Instrument: ICPMS-PE DRC-II

Work Order: Nu C150802

Analytical Sequence: 1508051 Dissolved

Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte  | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |       |       |       | Method Blank (Batch ID) |    | PQL  |
|----------|-----------------------------------|-------------------------------|-------|-------|-------|-------------------------|----|------|
| Vanadium | -0.18                             | 1                             | 2     | 3     | 4     | 1508042-BLK1            | NA | 3.00 |
|          |                                   | -0.08                         | 0.01  | -0.05 | 0.01  | -0.17                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
|          | -0.18                             | 1                             | 2     | 3     | 4     | 1508039-BLK1            | NA | 3.00 |
|          |                                   | -0.08                         | 0.01  | -0.05 | 0.01  | -0.07                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
| Chromium | -0.20                             | 1                             | 2     | 3     | 4     | 1508042-BLK1            | NA | 2.00 |
|          |                                   | -0.12                         | -0.18 | -0.19 | -0.19 | -0.16                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
|          | -0.20                             | 1                             | 2     | 3     | 4     | 1508039-BLK1            | NA | 2.00 |
|          |                                   | -0.12                         | -0.18 | -0.19 | -0.19 | -0.23                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
| Cobalt   | 0.03                              | 1                             | 2     | 3     | 4     | 1508039-BLK1            | NA | 0.20 |
|          |                                   | 0.02                          | 0.03  | 0.03  | 0.02  | -0.01                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
|          | 0.03                              | 1                             | 2     | 3     | 4     | 1508042-BLK1            | NA | 0.20 |
|          |                                   | 0.02                          | 0.03  | 0.03  | 0.02  | -0.02                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
| Nickel   | 0.06                              | 1                             | 2     | 3     | 4     | 1508042-BLK1            | NA | 1.00 |
|          |                                   | 0.04                          | 0.04  | 0.03  | 0.03  | -0.03                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
|          | 0.06                              | 1                             | 2     | 3     | 4     | 1508039-BLK1            | NA | 1.00 |
|          |                                   | 0.04                          | 0.04  | 0.03  | 0.03  | -0.03                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |

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TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.8Analysis Name: ICPMS Diss. MetalsInstrument: ICPMS-PE DRC-IIWork Order: Nu C150802Analytical Sequence: 1508051 **Dissolved**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte    | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |      |       |       | Method Blank (Batch ID) |    | PQL  |
|------------|-----------------------------------|-------------------------------|------|-------|-------|-------------------------|----|------|
| Copper     | 0.00                              | 1                             | 2    | 3     | 4     | 1508039-BLK1            | NA | 1.00 |
|            |                                   | 0.06                          | 0.02 | 0.04  | -0.03 | -0.13                   | NA |      |
|            | 5                                 | 6                             | 7    | 8     |       |                         |    |      |
|            |                                   |                               |      |       |       |                         |    |      |
|            | 0.00                              | 1                             | 2    | 3     | 4     | 1508042-BLK1            | NA | 1.00 |
|            |                                   | 0.06                          | 0.02 | 0.04  | -0.03 | -0.12                   | NA |      |
|            | 5                                 | 6                             | 7    | 8     |       |                         |    |      |
|            |                                   |                               |      |       |       |                         |    |      |
| Arsenic    | -0.08                             | 1                             | 2    | 3     | 4     | 1508039-BLK1            | NA | 2.00 |
|            |                                   | -0.01                         | 0.07 | -0.05 | 0.14  | 0.04                    | NA |      |
|            | 5                                 | 6                             | 7    | 8     |       |                         |    |      |
|            |                                   |                               |      |       |       |                         |    |      |
|            | -0.08                             | 1                             | 2    | 3     | 4     | 1508042-BLK1            | NA | 2.00 |
|            |                                   | -0.01                         | 0.07 | -0.05 | 0.14  | -0.08                   | NA |      |
|            | 5                                 | 6                             | 7    | 8     |       |                         |    |      |
|            |                                   |                               |      |       |       |                         |    |      |
| Selenium   | -0.25                             | 1                             | 2    | 3     | 4     | 1508039-BLK1            | NA | 2.00 |
|            |                                   | -0.02                         | 0.00 | -0.17 | -0.01 | -0.31                   | NA |      |
|            | 5                                 | 6                             | 7    | 8     |       |                         |    |      |
|            |                                   |                               |      |       |       |                         |    |      |
|            | -0.25                             | 1                             | 2    | 3     | 4     | 1508042-BLK1            | NA | 2.00 |
|            |                                   | -0.02                         | 0.00 | -0.17 | -0.01 | -0.02                   | NA |      |
|            | 5                                 | 6                             | 7    | 8     |       |                         |    |      |
|            |                                   |                               |      |       |       |                         |    |      |
| Molybdenum | 0.05                              | 1                             | 2    | 3     | 4     | 1508039-BLK1            | NA | 1.00 |
|            |                                   | 0.05                          | 0.04 | 0.05  | 0.05  | 0.08                    | NA |      |
|            | 5                                 | 6                             | 7    | 8     |       |                         |    |      |
|            |                                   |                               |      |       |       |                         |    |      |
|            | 0.05                              | 1                             | 2    | 3     | 4     | 1508042-BLK1            | NA | 1.00 |
|            |                                   | 0.05                          | 0.04 | 0.05  | 0.05  | -0.01                   | NA |      |
|            | 5                                 | 6                             | 7    | 8     |       |                         |    |      |
|            |                                   |                               |      |       |       |                         |    |      |



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TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.8

Analysis Name: ICPMS Diss. Metals

Instrument: ICPMS-PE DRC-II

Work Order: Nu C150802

Analytical Sequence: 1508051 Dissolved

Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte  | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |      |      |      | Method Blank (Batch ID) |    | PQL   |
|----------|-----------------------------------|-------------------------------|------|------|------|-------------------------|----|-------|
| Silver   | 0.02                              | 1                             | 2    | 3    | 4    | 1508042-BLK1            | NA | 1.00  |
|          |                                   | 0.02                          | 0.02 | 0.01 | 0.02 | -0.01                   | NA |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |    |       |
|          |                                   |                               |      |      |      |                         |    |       |
|          | 0.02                              | 1                             | 2    | 3    | 4    | 1508039-BLK1            | NA | 1.00  |
|          |                                   | 0.02                          | 0.02 | 0.01 | 0.02 | 0.00                    | NA |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |    |       |
|          |                                   |                               |      |      |      |                         |    |       |
| Cadmium  | -0.01                             | 1                             | 2    | 3    | 4    | 1508042-BLK1            | NA | 0.20  |
|          |                                   | -0.01                         | 0.03 | 0.02 | 0.02 | -0.03                   | NA |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |    |       |
|          |                                   |                               |      |      |      |                         |    |       |
|          | -0.01                             | 1                             | 2    | 3    | 4    | 1508039-BLK1            | NA | 0.20  |
|          |                                   | -0.01                         | 0.03 | 0.02 | 0.02 | -0.02                   | NA |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |    |       |
|          |                                   |                               |      |      |      |                         |    |       |
| Antimony | 0.10                              | 1                             | 2    | 3    | 4    | 1508042-BLK1            | NA | 1.00  |
|          |                                   | 0.21                          | 0.20 | 0.20 | 0.18 | 0.06                    | NA |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |    |       |
|          |                                   |                               |      |      |      |                         |    |       |
|          | 0.10                              | 1                             | 2    | 3    | 4    | 1508039-BLK1            | NA | 1.00  |
|          |                                   | 0.21                          | 0.20 | 0.20 | 0.18 | 0.09                    | NA |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |    |       |
|          |                                   |                               |      |      |      |                         |    |       |
| Barium   | 0.02                              | 1                             | 2    | 3    | 4    | 1508039-BLK1            | NA | 10.00 |
|          |                                   | 0.06                          | 0.06 | 0.04 | 0.03 | -0.03                   | NA |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |    |       |
|          |                                   |                               |      |      |      |                         |    |       |
|          | 0.02                              | 1                             | 2    | 3    | 4    | 1508042-BLK1            | NA | 10.00 |
|          |                                   | 0.06                          | 0.06 | 0.04 | 0.03 | -0.02                   | NA |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |    |       |
|          |                                   |                               |      |      |      |                         |    |       |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.8Analysis Name: ICPMS Diss. MetalsInstrument: ICPMS-PE DRC-IIWork Order: Nu C150802Analytical Sequence: 1508051 **Dissolved**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte  | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |       |       |       | Method Blank (Batch ID) |    | PQL  |
|----------|-----------------------------------|-------------------------------|-------|-------|-------|-------------------------|----|------|
| Thallium | 0.02                              | 1                             | 2     | 3     | 4     | 1508039-BLK1            | NA | 1.00 |
|          |                                   | 0.01                          | 0.01  | -0.01 | -0.02 | -0.05                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
|          | 0.02                              | 1                             | 2     | 3     | 4     | 1508042-BLK1            | NA | 1.00 |
|          |                                   | 0.01                          | 0.01  | -0.01 | -0.02 | -0.07                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
| Lead     | 0.00                              | 1                             | 2     | 3     | 4     | 1508042-BLK1            | NA | 0.20 |
|          |                                   | -0.01                         | -0.01 | -0.02 | -0.02 | -0.05                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |
|          | 0.00                              | 1                             | 2     | 3     | 4     | 1508039-BLK1            | NA | 0.20 |
|          |                                   | -0.01                         | -0.01 | -0.02 | -0.02 | -0.03                   | NA |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |    |      |
|          |                                   |                               |       |       |       |                         |    |      |

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.7Analysis Name: ICPOE Tot. Rec. MetalsInstrument: ICPOE - PE OptimaWork Order: Nu C150802Analytical Sequence: 1508056 **Total Recoverable**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte   | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |       |       |       | Method Blank (Batch ID) |    | PQL    |
|-----------|-----------------------------------|-------------------------------|-------|-------|-------|-------------------------|----|--------|
| Aluminum  | 4.24                              | 1                             | 2     | 3     | 4     | 1508046-BLK1            | NA | 50.00  |
|           |                                   | 3.98                          | 1.11  | -0.96 | 3.56  | -1.35                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
|           | 4.24                              | 1                             | 2     | 3     | 4     | 1508043-BLK1            | NA | 50.00  |
|           |                                   | 3.98                          | 1.11  | -0.96 | 3.56  | -4.16                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
| Beryllium | 0.09                              | 1                             | 2     | 3     | 4     | 1508043-BLK1            | NA | 5.00   |
|           |                                   | 0.08                          | 0.02  | 0.04  | 0.06  | -0.08                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
|           | 0.09                              | 1                             | 2     | 3     | 4     | 1508046-BLK1            | NA | 5.00   |
|           |                                   | 0.08                          | 0.02  | 0.04  | 0.06  | -0.03                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
| Calcium   | 1.61                              | 1                             | 2     | 3     | 4     | 1508043-BLK1            | NA | 250.00 |
|           |                                   | 2.27                          | 2.47  | -0.14 | -1.07 | 13.24                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
|           | 1.61                              | 1                             | 2     | 3     | 4     | 1508046-BLK1            | NA | 250.00 |
|           |                                   | 2.27                          | 2.47  | -0.14 | -1.07 | 3.53                    | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
| Iron      | -13.06                            | 1                             | 2     | 3     | 4     | 1508043-BLK1            | NA | 250.00 |
|           |                                   | 5.49                          | -8.25 | -7.04 | 7.90  | -2.54                   | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |
|           | -13.06                            | 1                             | 2     | 3     | 4     | 1508046-BLK1            | NA | 250.00 |
|           |                                   | 5.49                          | -8.25 | -7.04 | 7.90  | -13.03                  | NA |        |
|           |                                   | 5                             | 6     | 7     | 8     |                         |    |        |
|           |                                   |                               |       |       |       |                         |    |        |

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.7Analysis Name: ICPOE Tot. Rec. MetalsInstrument: ICPOE - PE OptimaWork Order: Nu C150802Analytical Sequence: 1508056 **Total Recoverable**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte   | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |       |       |       | Method Blank (Batch ID) |    | PQL      |
|-----------|-----------------------------------|-------------------------------|-------|-------|-------|-------------------------|----|----------|
| Potassium | 56.93                             | 1                             | 2     | 3     | 4     | 1508046-BLK1            | NA | 1,000.00 |
|           |                                   | 89.06                         | 80.67 | 76.96 | 65.41 | 66.24                   | NA |          |
|           | 5                                 | 6                             | 7     | 8     |       |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
|           | 56.93                             | 1                             | 2     | 3     | 4     | 1508043-BLK1            | NA | 1,000.00 |
|           |                                   | 89.06                         | 80.67 | 76.96 | 65.41 | 121.00                  | NA |          |
|           | 5                                 | 6                             | 7     | 8     |       |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
| Magnesium | 0.68                              | 1                             | 2     | 3     | 4     | 1508043-BLK1            | NA | 250.00   |
|           |                                   | 2.53                          | 1.51  | 1.86  | 1.23  | 2.26                    | NA |          |
|           | 5                                 | 6                             | 7     | 8     |       |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
|           | 0.68                              | 1                             | 2     | 3     | 4     | 1508046-BLK1            | NA | 250.00   |
|           |                                   | 2.53                          | 1.51  | 1.86  | 1.23  | -4.85                   | NA |          |
|           | 5                                 | 6                             | 7     | 8     |       |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
| Manganese | 0.10                              | 1                             | 2     | 3     | 4     | 1508043-BLK1            | NA | 5.00     |
|           |                                   | 0.06                          | 0.07  | -0.03 | -0.06 | -0.09                   | NA |          |
|           | 5                                 | 6                             | 7     | 8     |       |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
|           | 0.10                              | 1                             | 2     | 3     | 4     | 1508046-BLK1            | NA | 5.00     |
|           |                                   | 0.06                          | 0.07  | -0.03 | -0.06 | -0.04                   | NA |          |
|           | 5                                 | 6                             | 7     | 8     |       |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
| Sodium    | 1.40                              | 1                             | 2     | 3     | 4     | 1508046-BLK1            | NA | 1,000.00 |
|           |                                   | 6.38                          | 3.89  | 8.77  | 12.23 | 20.15                   | NA |          |
|           | 5                                 | 6                             | 7     | 8     |       |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |
|           | 1.40                              | 1                             | 2     | 3     | 4     | 1508043-BLK1            | NA | 1,000.00 |
|           |                                   | 6.38                          | 3.89  | 8.77  | 12.23 | 31.94                   | NA |          |
|           | 5                                 | 6                             | 7     | 8     |       |                         |    |          |
|           |                                   |                               |       |       |       |                         |    |          |

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
INORGANIC ANALYSES DATA SHEET  
Initial and Continuing Calibration Blanks

Analytical Method: 200.7Analysis Name: ICPOE Tot. Rec. MetalsInstrument: ICPOE - PE OptimaWork Order: Nu C150802Analytical Sequence: 1508056 **Total Recoverable**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |      |      |      | Method Blank (Batch ID) |    | PQL   |
|---------|-----------------------------------|-------------------------------|------|------|------|-------------------------|----|-------|
| Zinc    | 0.25                              | 1                             | 2    | 3    | 4    | 1508046-BLK1            | NA | 20.00 |
|         |                                   | 1.35                          | 1.08 | 0.66 | 1.28 | 2.42                    | NA |       |
|         | 5                                 | 6                             | 7    | 8    |      |                         |    |       |
|         |                                   |                               |      |      |      |                         |    |       |
|         | 0.25                              | 1                             | 2    | 3    | 4    | 1508043-BLK1            | NA | 20.00 |
|         |                                   | 1.35                          | 1.08 | 0.66 | 1.28 | 2.30                    | NA |       |
|         | 5                                 | 6                             | 7    | 8    |      |                         |    |       |
|         |                                   |                               |      |      |      |                         |    |       |

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.8

Analysis Name: ICPMS Tot. Rec. Metals

Instrument: ICPMS-PE DRC-II

Work Order: Nu C150802

Analytical Sequence: 1508057 Total Recoverable

Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte  | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |       |       |       | Method Blank (Batch ID) |              | PQL  |
|----------|-----------------------------------|-------------------------------|-------|-------|-------|-------------------------|--------------|------|
| Vanadium | 0.06                              | 1                             | 2     | 3     | 4     | NA                      | 1508046-BLK2 | 3.00 |
|          |                                   | 0.04                          | 0.00  | 0.04  | 0.01  | NA                      | 0.31         |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|          |                                   |                               |       |       |       |                         |              |      |
|          | 0.06                              | 1                             | 2     | 3     | 4     | NA                      | 1508043-BLK2 | 3.00 |
|          |                                   | 0.04                          | 0.00  | 0.04  | 0.01  | NA                      | 0.12         |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|          |                                   |                               |       |       |       |                         |              |      |
| Chromium | -0.17                             | 1                             | 2     | 3     | 4     | NA                      | 1508043-BLK2 | 2.00 |
|          |                                   | -0.27                         | -0.27 | -0.22 | -0.22 | NA                      | 0.01         |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|          |                                   |                               |       |       |       |                         |              |      |
|          | -0.17                             | 1                             | 2     | 3     | 4     | NA                      | 1508046-BLK2 | 2.00 |
|          |                                   | -0.27                         | -0.27 | -0.22 | -0.22 | NA                      | -0.01        |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|          |                                   |                               |       |       |       |                         |              |      |
| Cobalt   | 0.01                              | 1                             | 2     | 3     | 4     | NA                      | 1508043-BLK2 | 0.20 |
|          |                                   | 0.01                          | 0.01  | 0.02  | 0.03  | NA                      | 0.02         |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|          |                                   |                               |       |       |       |                         |              |      |
|          | 0.01                              | 1                             | 2     | 3     | 4     | NA                      | 1508046-BLK2 | 0.20 |
|          |                                   | 0.01                          | 0.01  | 0.02  | 0.03  | NA                      | -0.01        |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|          |                                   |                               |       |       |       |                         |              |      |
| Nickel   | 0.01                              | 1                             | 2     | 3     | 4     | NA                      | 1508043-BLK2 | 1.00 |
|          |                                   | -0.01                         | 0.01  | 0.04  | 0.06  | NA                      | 0.03         |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|          |                                   |                               |       |       |       |                         |              |      |
|          | 0.01                              | 1                             | 2     | 3     | 4     | NA                      | 1508046-BLK2 | 1.00 |
|          |                                   | -0.01                         | 0.01  | 0.04  | 0.06  | NA                      | -0.01        |      |
|          |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|          |                                   |                               |       |       |       |                         |              |      |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.8

Analysis Name: ICPMS Tot. Rec. Metals

Instrument: ICPMS-PE DRC-II

Work Order: Nu C150802

Analytical Sequence: 1508057 Total Recoverable

Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte    | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |       |       |       | Method Blank (Batch ID) |              | PQL  |
|------------|-----------------------------------|-------------------------------|-------|-------|-------|-------------------------|--------------|------|
| Copper     | 0.01                              | 1                             | 2     | 3     | 4     | NA                      | 1508046-BLK2 | 1.00 |
|            |                                   | 0.02                          | 0.02  | 0.02  | 0.01  | NA                      | 0.02         |      |
|            |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|            |                                   |                               |       |       |       |                         |              |      |
|            | 0.01                              | 1                             | 2     | 3     | 4     | NA                      | 1508043-BLK2 | 1.00 |
|            |                                   | 0.02                          | 0.02  | 0.02  | 0.01  | NA                      | 0.07         |      |
|            |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|            |                                   |                               |       |       |       |                         |              |      |
| Arsenic    | -0.01                             | 1                             | 2     | 3     | 4     | NA                      | 1508043-BLK2 | 2.00 |
|            |                                   | 0.04                          | -0.12 | -0.12 | -0.19 | NA                      | -0.08        |      |
|            |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|            |                                   |                               |       |       |       |                         |              |      |
|            | -0.01                             | 1                             | 2     | 3     | 4     | NA                      | 1508046-BLK2 | 2.00 |
|            |                                   | 0.04                          | -0.12 | -0.12 | -0.19 | NA                      | -0.14        |      |
|            |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|            |                                   |                               |       |       |       |                         |              |      |
| Selenium   | 0.11                              | 1                             | 2     | 3     | 4     | NA                      | 1508046-BLK2 | 2.00 |
|            |                                   | 0.03                          | -0.02 | 0.01  | 0.08  | NA                      | -0.20        |      |
|            |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|            |                                   |                               |       |       |       |                         |              |      |
|            | 0.11                              | 1                             | 2     | 3     | 4     | NA                      | 1508043-BLK2 | 2.00 |
|            |                                   | 0.03                          | -0.02 | 0.01  | 0.08  | NA                      | 0.18         |      |
|            |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|            |                                   |                               |       |       |       |                         |              |      |
| Molybdenum | 0.04                              | 1                             | 2     | 3     | 4     | NA                      | 1508043-BLK2 | 1.00 |
|            |                                   | 0.03                          | 0.04  | 0.05  | 0.05  | NA                      | 0.23         |      |
|            |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|            |                                   |                               |       |       |       |                         |              |      |
|            | 0.04                              | 1                             | 2     | 3     | 4     | NA                      | 1508046-BLK2 | 1.00 |
|            |                                   | 0.03                          | 0.04  | 0.05  | 0.05  | NA                      | 0.00         |      |
|            |                                   | 5                             | 6     | 7     | 8     |                         |              |      |
|            |                                   |                               |       |       |       |                         |              |      |

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Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.8Analysis Name: ICPMS Tot. Rec. MetalsInstrument: ICPMS-PE DRC-IIWork Order: Nu C150802Analytical Sequence: 1508057 **Total Recoverable**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte  | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |      |      |      | Method Blank (Batch ID) |              | PQL   |
|----------|-----------------------------------|-------------------------------|------|------|------|-------------------------|--------------|-------|
| Silver   | 0.03                              | 1                             | 2    | 3    | 4    | NA                      | 1508046-BLK2 | 1.00  |
|          |                                   | 0.03                          | 0.02 | 0.02 | 0.04 | NA                      | 0.00         |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |       |
|          |                                   |                               |      |      |      |                         |              |       |
|          | 0.03                              | 1                             | 2    | 3    | 4    | NA                      | 1508043-BLK2 | 1.00  |
|          |                                   | 0.03                          | 0.02 | 0.02 | 0.04 | NA                      | 0.02         |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |       |
|          |                                   |                               |      |      |      |                         |              |       |
| Cadmium  | 0.02                              | 1                             | 2    | 3    | 4    | NA                      | 1508043-BLK2 | 0.20  |
|          |                                   | 0.02                          | 0.02 | 0.03 | 0.05 | NA                      | 0.01         |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |       |
|          |                                   |                               |      |      |      |                         |              |       |
|          | 0.02                              | 1                             | 2    | 3    | 4    | NA                      | 1508046-BLK2 | 0.20  |
|          |                                   | 0.02                          | 0.02 | 0.03 | 0.05 | NA                      | 0.01         |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |       |
|          |                                   |                               |      |      |      |                         |              |       |
| Antimony | 0.10                              | 1                             | 2    | 3    | 4    | NA                      | 1508043-BLK2 | 1.00  |
|          |                                   | 0.20                          | 0.19 | 0.18 | 0.21 | NA                      | -0.01        |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |       |
|          |                                   |                               |      |      |      |                         |              |       |
|          | 0.10                              | 1                             | 2    | 3    | 4    | NA                      | 1508046-BLK2 | 1.00  |
|          |                                   | 0.20                          | 0.19 | 0.18 | 0.21 | NA                      | 0.01         |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |       |
|          |                                   |                               |      |      |      |                         |              |       |
| Barium   | 0.02                              | 1                             | 2    | 3    | 4    | NA                      | 1508043-BLK2 | 10.00 |
|          |                                   | 0.04                          | 0.03 | 0.02 | 0.01 | NA                      | 0.28         |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |       |
|          |                                   |                               |      |      |      |                         |              |       |
|          | 0.02                              | 1                             | 2    | 3    | 4    | NA                      | 1508046-BLK2 | 10.00 |
|          |                                   | 0.04                          | 0.03 | 0.02 | 0.01 | NA                      | 0.00         |       |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |       |
|          |                                   |                               |      |      |      |                         |              |       |



Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8  
**INORGANIC ANALYSES DATA SHEET**  
 Intial and Continuing Calibration Blanks

Analytical Method: 200.8Analysis Name: ICPMS Tot. Rec. MetalsInstrument: ICPMS-PE DRC-IIWork Order: Nu C150802Analytical Sequence: 1508057 **Total Recoverable**Concentration Units: ug/L

Blank criteria = +/- 5x analyte MDL (+/- PQL)

| Analyte  | Initial Calibration Blank (1 & 2) | Continuing Calibration Blanks |      |      |      | Method Blank (Batch ID) |              | PQL  |
|----------|-----------------------------------|-------------------------------|------|------|------|-------------------------|--------------|------|
| Thallium | 0.02                              | 1                             | 2    | 3    | 4    | NA                      | 1508046-BLK2 | 1.00 |
|          |                                   | 0.21                          | 0.05 | 0.21 | 0.09 | NA                      | 0.01         |      |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |      |
|          |                                   |                               |      |      |      |                         |              |      |
|          | 0.02                              | 1                             | 2    | 3    | 4    | NA                      | 1508043-BLK2 | 1.00 |
|          |                                   | 0.21                          | 0.05 | 0.21 | 0.09 | NA                      | 0.00         |      |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |      |
|          |                                   |                               |      |      |      |                         |              |      |
| Lead     | 0.01                              | 1                             | 2    | 3    | 4    | NA                      | 1508043-BLK2 | 0.20 |
|          |                                   | 0.03                          | 0.02 | 0.03 | 0.03 | NA                      | 0.01         |      |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |      |
|          |                                   |                               |      |      |      |                         |              |      |
|          | 0.01                              | 1                             | 2    | 3    | 4    | NA                      | 1508046-BLK2 | 0.20 |
|          |                                   | 0.03                          | 0.02 | 0.03 | 0.03 | NA                      | 0.00         |      |
|          |                                   | 5                             | 6    | 7    | 8    |                         |              |      |
|          |                                   |                               |      |      |      |                         |              |      |

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

Mettler AT

Method: EPA 310.1

Analysis Name: WC - Alkalinity

Sequence: 1508048

Work Order: C150802

Units: mg CaCO<sub>3</sub> / L

| Total Analyte    | Initial (ICV1, ICV2) |       |    | Continuing Calibration Verification Standards (CCVs) |       |      |      |       |    |      |       |    |
|------------------|----------------------|-------|----|--|-------|------|------|-------|----|------|-------|----|
|                  | True                 | Found | %R | True   | Found | %R   | True | Found | %R | True | Found | %R |
| Total Alkalinity |                      |       |    | 1  |       |      | 2    |       |    | 3    |       |    |
|                  |                      |       |    | 100  | 98.7  | 98.7 |      |       |    |      |       |    |
|                  |                      |       |    | 4  |       |      | 5    |       |    | 6    |       |    |
|                  |                      |       |    |  |       |      |      |       |    |      |       |    |
|                  |                      |       |    | 7  |       |      | 8    |       |    | 9    |       |    |
|                  |                      |       |    |  |       |      |      |       |    |      |       |    |

Metals - ICV &amp; CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria -ICV = 90 - 110%R, CCV = 80 - 120%R.

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPOE - PE Optima

Method: 200.7

Analysis Name: ICPOE Diss. Metals

Sequence: 1508049

Work Order: C150802

Units: ug/L

| Dissolved Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |       |       |       |       |       |       |
|-------------------|----------------------|-------|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|
|                   | True                 | Found | %R    | True   | Found | %R    | True  | Found | %R    | True  | Found | %R    |
| Aluminum          | 12500                | 12500 | 100.0 |  | 1     |       |       | 2     |       |       | 3     |       |
|                   |                      |       |       | 12500  | 12400 | 99.2  | 12500 | 12440 | 99.5  | 12500 | 12160 | 97.3  |
|                   |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                   |                      |       |       | 12500  | 12240 | 97.9  |       |       |       |       |       |       |
|                   |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |
| Beryllium         | 500                  | 509.0 | 101.8 |  | 1     |       |       | 2     |       |       | 3     |       |
|                   |                      |       |       | 500  | 503.4 | 100.7 | 500   | 504.7 | 100.9 | 500   | 508.3 | 101.7 |
|                   |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                   |                      |       |       | 500  | 508.9 | 101.8 |       |       |       |       |       |       |
|                   |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |
| Calcium           | 12500                | 12850 | 102.8 |  | 1     |       |       | 2     |       |       | 3     |       |
|                   |                      |       |       | 12500  | 12610 | 100.9 | 12500 | 12640 | 101.1 | 12500 | 12410 | 99.3  |
|                   |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                   |                      |       |       | 12500  | 12590 | 100.7 |       |       |       |       |       |       |
|                   |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |
| Iron              | 12500                | 12700 | 101.6 |  | 1     |       |       | 2     |       |       | 3     |       |
|                   |                      |       |       | 12500  | 12490 | 99.9  | 12500 | 12500 | 100.0 | 12500 | 12390 | 99.1  |
|                   |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                   |                      |       |       | 12500  | 12570 | 100.6 |       |       |       |       |       |       |
|                   |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |
| Magnesium         | 12500                | 12620 | 101.0 |  | 1     |       |       | 2     |       |       | 3     |       |
|                   |                      |       |       | 12500  | 12570 | 100.6 | 12500 | 12590 | 100.7 | 12500 | 12320 | 98.6  |
|                   |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                   |                      |       |       | 12500  | 12400 | 99.2  |       |       |       |       |       |       |
|                   |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |
| Manganese         | 1000                 | 1026  | 102.6 |  | 1     |       |       | 2     |       |       | 3     |       |
|                   |                      |       |       | 1000   | 1016  | 101.6 | 1000  | 1016  | 101.6 | 1000  | 1027  | 102.7 |
|                   |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                   |                      |       |       | 1000   | 1022  | 102.2 |       |       |       |       |       |       |
|                   |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPOE - PE Optima

Method: 200.7

Analysis Name: ICPOE Diss. Metals

Sequence: 1508049

Work Order: C150802

Units: ug/L

| Dissolved Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |       |       |       |       |       |       |
|-------------------|----------------------|-------|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|
|                   | True                 | Found | %R    | True   | Found | %R    | True  | Found | %R    | True  | Found | %R    |
| Potassium         | 25000                | 25000 | 100.0 | 1  |       |       | 2     |       |       | 3     |       |       |
|                   |                      |       |       | 25000  | 24860 | 99.4  | 25000 | 24930 | 99.7  | 25000 | 24450 | 97.8  |
|                   |                      |       |       | 4  |       |       | 5     |       |       | 6     |       |       |
|                   |                      |       |       | 25000  | 24570 | 98.3  |       |       |       |       |       |       |
|                   |                      |       |       | 7  |       |       | 8     |       |       | 9     |       |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |
| Sodium            | 12500                | 12500 | 100.0 | 1  |       |       | 2     |       |       | 3     |       |       |
|                   |                      |       |       | 12500  | 12440 | 99.5  | 12500 | 12490 | 99.9  | 12500 | 12220 | 97.8  |
|                   |                      |       |       | 4  |       |       | 5     |       |       | 6     |       |       |
|                   |                      |       |       | 12500  | 12290 | 98.3  |       |       |       |       |       |       |
|                   |                      |       |       | 7  |       |       | 8     |       |       | 9     |       |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |
| Zinc              | 2500                 | 2565  | 102.6 | 1  |       |       | 2     |       |       | 3     |       |       |
|                   |                      |       |       | 2500   | 2497  | 99.9  | 2500  | 2511  | 100.4 | 2500  | 2544  | 101.8 |
|                   |                      |       |       | 4  |       |       | 5     |       |       | 6     |       |       |
|                   |                      |       |       | 2500   | 2556  | 102.2 |       |       |       |       |       |       |
|                   |                      |       |       | 7  |       |       | 8     |       |       | 9     |       |       |
|                   |                      |       |       |  |       |       |       |       |       |       |       |       |

Metals - ICV &amp; CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria -ICV = 90 - 110%R, CCV = 80 - 120%R.

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

CVAA FIMS - PE

Method: 245.1

Analysis Name: TM\_Mercury 245.1

Sequence: 1508050

Work Order: C150802

Units: ug/L

| Total Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |      |       |      |      |       |       |
|---------------|----------------------|-------|-------|--|-------|-------|------|-------|------|------|-------|-------|
|               | True                 | Found | %R    | True   | Found | %R    | True | Found | %R   | True | Found | %R    |
| Mercury       | 5.00                 | 5.05  | 101.0 | 1  |       |       | 2    |       |      | 3    |       |       |
|               |                      |       |       | 5.00   | 4.95  | 99.0  | 5.00 | 4.92  | 98.4 | 5.00 | 5.13  | 102.6 |
|               |                      |       |       | 4  |       |       | 5    |       |      | 6    |       |       |
|               |                      | 5.00  |       |  | 5.17  | 103.4 |      |       |      |      |       |       |
|               |                      | 7     |       |  | 8     |       |      | 9     |      |      |       |       |
|               |                      |       |       |  |       |       |      |       |      |      |       |       |

Metals - ICV &amp; CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria -ICV = 90 - 110%R, CCV = 80 - 120%R.

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPMS-PE DRC-II

Method: 200.8

Analysis Name: ICPMS Diss. Metals

Sequence: 1508051

Work Order: C150802

Units: ug/L

| Dissolved Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |      |       |       |      |       |       |
|-------------------|----------------------|-------|-------|--|-------|-------|------|-------|-------|------|-------|-------|
|                   | True                 | Found | %R    | True   | Found | %R    | True | Found | %R    | True | Found | %R    |
| Antimony          | 50.0                 | 50.8  | 101.6 |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 48.7  | 97.4  | 50.0 | 49.5  | 99.0  | 50.0 | 50.5  | 101.0 |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 49.8  | 99.6  |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Arsenic           | 50.0                 | 50.2  | 100.4 |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 49.4  | 98.8  | 50.0 | 49.7  | 99.4  | 50.0 | 50.8  | 101.6 |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 49.3  | 98.6  |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Barium            | 50.0                 | 50.1  | 100.2 |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 50.5  | 101.0 | 50.0 | 50.7  | 101.4 | 50.0 | 50.5  | 101.0 |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 51.3  | 102.6 |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Cadmium           | 50.0                 | 48.8  | 97.6  |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 49.5  | 99.0  | 50.0 | 50.3  | 100.6 | 50.0 | 51.1  | 102.2 |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 50.6  | 101.2 |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Chromium          | 50.0                 | 48.9  | 97.8  |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 49.4  | 98.8  | 50.0 | 48.2  | 96.4  | 50.0 | 49.1  | 98.2  |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 47.3  | 94.6  |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Cobalt            | 50.0                 | 49.2  | 98.4  |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 50.0  | 100.0 | 50.0 | 49.6  | 99.2  | 50.0 | 49.4  | 98.8  |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 48.4  | 96.8  |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPMS-PE DRC-II

Method: 200.8

Analysis Name: ICPMS Diss. Metals

Sequence: 1508051

Work Order: C150802

Units: ug/L

| Dissolved Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |      |       |       |      |       |       |
|-------------------|----------------------|-------|-------|--|-------|-------|------|-------|-------|------|-------|-------|
|                   | True                 | Found | %R    | True   | Found | %R    | True | Found | %R    | True | Found | %R    |
| Copper            | 50.0                 | 49.5  | 99.0  |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 50.1  | 100.2 | 50.0 | 48.4  | 96.8  | 50.0 | 49.1  | 98.2  |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 48.7  | 97.4  |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Lead              | 50.0                 | 50.2  | 100.4 |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 49.4  | 98.8  | 50.0 | 49.7  | 99.4  | 50.0 | 50.2  | 100.4 |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 49.4  | 98.8  |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Molybdenum        | 50.0                 | 49.8  | 99.6  |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 51.6  | 103.2 | 50.0 | 51.7  | 103.4 | 50.0 | 52.3  | 104.6 |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 51.0  | 102.0 |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Nickel            | 50.0                 | 50.1  | 100.2 |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 49.7  | 99.4  | 50.0 | 48.2  | 96.4  | 50.0 | 49.6  | 99.2  |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 47.8  | 95.6  |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Selenium          | 50.0                 | 50.8  | 101.6 |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 50.2  | 100.4 | 50.0 | 49.1  | 98.2  | 50.0 | 50.1  | 100.2 |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 49.5  | 99.0  |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |
| Silver            | 50.0                 | 49.5  | 99.0  |  | 1     |       |      | 2     |       |      | 3     |       |
|                   |                      |       |       | 50.0   | 49.5  | 99.0  | 50.0 | 50.4  | 100.8 | 50.0 | 50.9  | 101.8 |
|                   |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                   |                      |       |       | 50.0   | 50.6  | 101.2 |      |       |       |      |       |       |
|                   |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                   |                      |       |       |  |       |       |      |       |       |      |       |       |

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPMS-PE DRC-II

Method: 200.8

Analysis Name: ICPMS Diss. Metals

Sequence: 1508051

Work Order: C150802

Units: ug/L

| Dissolved Analyte | Initial (ICV1, ICV2) |       |      | Continuing Calibration Verification Standards (CCVs) |       |      |      |       |      |      |       |      |
|-------------------|----------------------|-------|------|--|-------|------|------|-------|------|------|-------|------|
|                   | True                 | Found | %R   | True   | Found | %R   | True | Found | %R   | True | Found | %R   |
| Thallium          | 50.0                 | 49.7  | 99.4 |  | 1     |      |      | 2     |      |      | 3     |      |
|                   |                      |       |      | 50.0   | 49.3  | 98.6 | 50.0 | 49.2  | 98.4 | 50.0 | 49.8  | 99.6 |
|                   |                      |       |      |  | 4     |      |      | 5     |      |      | 6     |      |
|                   |                      |       |      | 50.0   | 49.4  | 98.8 |      |       |      |      |       |      |
|                   |                      |       |      |  | 7     |      |      | 8     |      |      | 9     |      |
|                   |                      |       |      |  |       |      |      |       |      |      |       |      |
| Vanadium          | 50.0                 | 48.7  | 97.4 |  | 1     |      |      | 2     |      |      | 3     |      |
|                   |                      |       |      | 50.0   | 49.3  | 98.6 | 50.0 | 48.8  | 97.6 | 50.0 | 48.6  | 97.2 |
|                   |                      |       |      |  | 4     |      |      | 5     |      |      | 6     |      |
|                   |                      |       |      | 50.0   | 48.9  | 97.8 |      |       |      |      |       |      |
|                   |                      |       |      |  | 7     |      |      | 8     |      |      | 9     |      |
|                   |                      |       |      |  |       |      |      |       |      |      |       |      |

Metals - ICV &amp; CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria -ICV = 90 - 110%R, CCV = 80 - 120%R.



TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

pH Meter

Method: 150.1

Analysis Name: WC-pH

Sequence: 1508053

Work Order: C150802

Units: pH Units

| WET<br>Analyte | Initial (ICV1, ICV2) |       |    | Continuing Calibration Verification Standards (CCVs) |       |    |      |       |    |      |       |    |
|----------------|----------------------|-------|----|--|-------|----|------|-------|----|------|-------|----|
|                | True                 | Found | %R | True   | Found | %R | True | Found | %R | True | Found | %R |
| pH             |                      |       |    | 1  |       |    | 2    |       |    | 3    |       |    |
|                |                      |       |    |  |       |    |      |       |    |      |       |    |
|                |                      |       |    | 4  |       |    | 5    |       |    | 6    |       |    |
|                |                      |       |    |  |       |    |      |       |    |      |       |    |
|                |                      |       |    | 7  |       |    | 8    |       |    | 9    |       |    |
|                |                      |       |    |  |       |    |      |       |    |      |       |    |

Metals - ICV &amp; CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria -ICV = 90 - 110%R, CCV = 80 - 120%R.

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPOE - PE Optima

Method: 200.7

Analysis Name: ICPOE Tot. Rec. Metals

Sequence: 1508056

Work Order: C150802

Units: ug/L

| Total Recoverable Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |       |       |       |       |       |       |
|---------------------------|----------------------|-------|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|
|                           | True                 | Found | %R    | True   | Found | %R    | True  | Found | %R    | True  | Found | %R    |
| Aluminum                  | 12500                | 12450 | 99.6  |  | 1     |       |       | 2     |       |       | 3     |       |
|                           |                      |       |       | 12500  | 12300 | 98.4  | 12500 | 12340 | 98.7  | 12500 | 12550 | 100.4 |
|                           |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                           |                      |       |       | 12500  | 12400 | 99.2  |       |       |       |       |       |       |
|                           |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |
| Beryllium                 | 500                  | 501.9 | 100.4 |  | 1     |       |       | 2     |       |       | 3     |       |
|                           |                      |       |       | 500  | 507.8 | 101.6 | 500   | 511.4 | 102.3 | 500   | 492.2 | 98.4  |
|                           |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                           |                      |       |       | 500  | 490.3 | 98.1  |       |       |       |       |       |       |
|                           |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |
| Calcium                   | 12500                | 12460 | 99.7  |  | 1     |       |       | 2     |       |       | 3     |       |
|                           |                      |       |       | 12500  | 12520 | 100.2 | 12500 | 12650 | 101.2 | 12500 | 12280 | 98.2  |
|                           |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                           |                      |       |       | 12500  | 12140 | 97.1  |       |       |       |       |       |       |
|                           |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |
| Iron                      | 12500                | 12580 | 100.6 |  | 1     |       |       | 2     |       |       | 3     |       |
|                           |                      |       |       | 12500  | 12540 | 100.3 | 12500 | 12630 | 101.0 | 12500 | 12500 | 100.0 |
|                           |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                           |                      |       |       | 12500  | 12590 | 100.7 |       |       |       |       |       |       |
|                           |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |
| Magnesium                 | 12500                | 12530 | 100.2 |  | 1     |       |       | 2     |       |       | 3     |       |
|                           |                      |       |       | 12500  | 12430 | 99.4  | 12500 | 12490 | 99.9  | 12500 | 12600 | 100.8 |
|                           |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                           |                      |       |       | 12500  | 12490 | 99.9  |       |       |       |       |       |       |
|                           |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |
| Manganese                 | 1000                 | 1010  | 101.0 |  | 1     |       |       | 2     |       |       | 3     |       |
|                           |                      |       |       | 1000   | 1023  | 102.3 | 1000  | 1029  | 102.9 | 1000  | 991.3 | 99.1  |
|                           |                      |       |       |  | 4     |       |       | 5     |       |       | 6     |       |
|                           |                      |       |       | 1000   | 987.8 | 98.8  |       |       |       |       |       |       |
|                           |                      |       |       |  | 7     |       |       | 8     |       |       | 9     |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPOE - PE Optima

Method: 200.7

Analysis Name: ICPOE Tot. Rec. Metals

Sequence: 1508056

Work Order: C150802

Units: ug/L

| Total Recoverable Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |       |       |       |       |       |       |
|---------------------------|----------------------|-------|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|
|                           | True                 | Found | %R    | True   | Found | %R    | True  | Found | %R    | True  | Found | %R    |
| Potassium                 | 25000                | 24850 | 99.4  | 1  |       |       | 2     |       |       | 3     |       |       |
|                           |                      |       |       | 25000  | 24550 | 98.2  | 25000 | 24600 | 98.4  | 25000 | 24860 | 99.4  |
|                           |                      |       |       | 4  |       |       | 5     |       |       | 6     |       |       |
|                           |                      |       |       | 25000  | 24590 | 98.4  |       |       |       |       |       |       |
|                           |                      |       |       | 7  |       |       | 8     |       |       | 9     |       |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |
| Sodium                    | 12500                | 12400 | 99.2  | 1  |       |       | 2     |       |       | 3     |       |       |
|                           |                      |       |       | 12500  | 12320 | 98.6  | 12500 | 12370 | 99.0  | 12500 | 12500 | 100.0 |
|                           |                      |       |       | 4  |       |       | 5     |       |       | 6     |       |       |
|                           |                      |       |       | 12500  | 12340 | 98.7  |       |       |       |       |       |       |
|                           |                      |       |       | 7  |       |       | 8     |       |       | 9     |       |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |
| Zinc                      | 2500                 | 2558  | 102.3 | 1  |       |       | 2     |       |       | 3     |       |       |
|                           |                      |       |       | 2500   | 2599  | 104.0 | 2500  | 2633  | 105.3 | 2500  | 2499  | 100.0 |
|                           |                      |       |       | 4  |       |       | 5     |       |       | 6     |       |       |
|                           |                      |       |       | 2500   | 2494  | 99.8  |       |       |       |       |       |       |
|                           |                      |       |       | 7  |       |       | 8     |       |       | 9     |       |       |
|                           |                      |       |       |  |       |       |       |       |       |       |       |       |

Metals - ICV &amp; CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria -ICV = 90 - 110%R, CCV = 80 - 120%R.

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPMS-PE DRC-II

Method: 200.8

Analysis Name: ICPMS Tot. Rec. Metals

Sequence: 1508057

Work Order: C150802

Units: ug/L

| Total Recoverable Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |      |       |      |      |       |      |
|---------------------------|----------------------|-------|-------|--|-------|-------|------|-------|------|------|-------|------|
|                           | True                 | Found | %R    | True   | Found | %R    | True | Found | %R   | True | Found | %R   |
| Antimony                  | 50.0                 | 50.77 | 101.5 |  | 1     |       |      | 2     |      |      | 3     |      |
|                           |                      |       |       | 50.0   | 47.50 | 95.0  | 50.0 | 46.88 | 93.8 | 50.0 | 47.33 | 94.7 |
|                           |                      |       |       |  | 4     |       |      | 5     |      |      | 6     |      |
|                           |                      |       |       | 50.0   | 46.97 | 93.9  |      |       |      |      |       |      |
|                           |                      |       |       |  | 7     |       |      | 8     |      |      | 9     |      |
|                           |                      |       |       |  |       |       |      |       |      |      |       |      |
| Arsenic                   | 50.0                 | 49.62 | 99.2  |  | 1     |       |      | 2     |      |      | 3     |      |
|                           |                      |       |       | 50.0   | 49.64 | 99.3  | 50.0 | 47.04 | 94.1 | 50.0 | 48.27 | 96.5 |
|                           |                      |       |       |  | 4     |       |      | 5     |      |      | 6     |      |
|                           |                      |       |       | 50.0   | 46.78 | 93.6  |      |       |      |      |       |      |
|                           |                      |       |       |  | 7     |       |      | 8     |      |      | 9     |      |
|                           |                      |       |       |  |       |       |      |       |      |      |       |      |
| Barium                    | 50.0                 | 49.48 | 99.0  |  | 1     |       |      | 2     |      |      | 3     |      |
|                           |                      |       |       | 50.0   | 50.04 | 100.1 | 50.0 | 47.69 | 95.4 | 50.0 | 47.62 | 95.2 |
|                           |                      |       |       |  | 4     |       |      | 5     |      |      | 6     |      |
|                           |                      |       |       | 50.0   | 46.28 | 92.6  |      |       |      |      |       |      |
|                           |                      |       |       |  | 7     |       |      | 8     |      |      | 9     |      |
|                           |                      |       |       |  |       |       |      |       |      |      |       |      |
| Cadmium                   | 50.0                 | 50.44 | 100.9 |  | 1     |       |      | 2     |      |      | 3     |      |
|                           |                      |       |       | 50.0   | 49.61 | 99.2  | 50.0 | 49.91 | 99.8 | 50.0 | 49.90 | 99.8 |
|                           |                      |       |       |  | 4     |       |      | 5     |      |      | 6     |      |
|                           |                      |       |       | 50.0   | 49.44 | 98.9  |      |       |      |      |       |      |
|                           |                      |       |       |  | 7     |       |      | 8     |      |      | 9     |      |
|                           |                      |       |       |  |       |       |      |       |      |      |       |      |
| Chromium                  | 50.0                 | 50.16 | 100.3 |  | 1     |       |      | 2     |      |      | 3     |      |
|                           |                      |       |       | 50.0   | 48.57 | 97.1  | 50.0 | 46.44 | 92.9 | 50.0 | 46.71 | 93.4 |
|                           |                      |       |       |  | 4     |       |      | 5     |      |      | 6     |      |
|                           |                      |       |       | 50.0   | 47.34 | 94.7  |      |       |      |      |       |      |
|                           |                      |       |       |  | 7     |       |      | 8     |      |      | 9     |      |
|                           |                      |       |       |  |       |       |      |       |      |      |       |      |
| Cobalt                    | 50.0                 | 50.72 | 101.4 |  | 1     |       |      | 2     |      |      | 3     |      |
|                           |                      |       |       | 50.0   | 47.69 | 95.4  | 50.0 | 47.76 | 95.5 | 50.0 | 47.67 | 95.3 |
|                           |                      |       |       |  | 4     |       |      | 5     |      |      | 6     |      |
|                           |                      |       |       | 50.0   | 48.08 | 96.2  |      |       |      |      |       |      |
|                           |                      |       |       |  | 7     |       |      | 8     |      |      | 9     |      |
|                           |                      |       |       |  |       |       |      |       |      |      |       |      |

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPMS-PE DRC-II

Method: 200.8

Analysis Name: ICPMS Tot. Rec. Metals

Sequence: 1508057

Work Order: C150802

Units: ug/L

| Total Recoverable Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |       |      |       |       |      |       |       |
|---------------------------|----------------------|-------|-------|--|-------|-------|------|-------|-------|------|-------|-------|
|                           | True                 | Found | %R    | True   | Found | %R    | True | Found | %R    | True | Found | %R    |
| Copper                    | 50.0                 | 51.01 | 102.0 |  | 1     |       |      | 2     |       |      | 3     |       |
|                           |                      |       |       | 50.0   | 48.74 | 97.5  | 50.0 | 46.86 | 93.7  | 50.0 | 46.72 | 93.4  |
|                           |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                           |                      |       |       | 50.0   | 48.07 | 96.1  |      |       |       |      |       |       |
|                           |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                           |                      |       |       |  |       |       |      |       |       |      |       |       |
| Lead                      | 50.0                 | 49.59 | 99.2  |  | 1     |       |      | 2     |       |      | 3     |       |
|                           |                      |       |       | 50.0   | 49.42 | 98.8  | 50.0 | 48.07 | 96.1  | 50.0 | 48.33 | 96.7  |
|                           |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                           |                      |       |       | 50.0   | 47.80 | 95.6  |      |       |       |      |       |       |
|                           |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                           |                      |       |       |  |       |       |      |       |       |      |       |       |
| Molybdenum                | 50.0                 | 50.55 | 101.1 |  | 1     |       |      | 2     |       |      | 3     |       |
|                           |                      |       |       | 50.0   | 50.21 | 100.4 | 50.0 | 50.79 | 101.6 | 50.0 | 50.53 | 101.1 |
|                           |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                           |                      |       |       | 50.0   | 50.93 | 101.9 |      |       |       |      |       |       |
|                           |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                           |                      |       |       |  |       |       |      |       |       |      |       |       |
| Nickel                    | 50.0                 | 49.81 | 99.6  |  | 1     |       |      | 2     |       |      | 3     |       |
|                           |                      |       |       | 50.0   | 47.95 | 95.9  | 50.0 | 47.19 | 94.4  | 50.0 | 46.18 | 92.4  |
|                           |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                           |                      |       |       | 50.0   | 47.97 | 95.9  |      |       |       |      |       |       |
|                           |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                           |                      |       |       |  |       |       |      |       |       |      |       |       |
| Selenium                  | 50.0                 | 48.31 | 96.6  |  | 1     |       |      | 2     |       |      | 3     |       |
|                           |                      |       |       | 50.0   | 49.87 | 99.7  | 50.0 | 46.00 | 92.0  | 50.0 | 47.43 | 94.9  |
|                           |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                           |                      |       |       | 50.0   | 45.95 | 91.9  |      |       |       |      |       |       |
|                           |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                           |                      |       |       |  |       |       |      |       |       |      |       |       |
| Silver                    | 50.0                 | 50.20 | 100.4 |  | 1     |       |      | 2     |       |      | 3     |       |
|                           |                      |       |       | 50.0   | 48.01 | 96.0  | 50.0 | 49.09 | 98.2  | 50.0 | 48.89 | 97.8  |
|                           |                      |       |       |  | 4     |       |      | 5     |       |      | 6     |       |
|                           |                      |       |       | 50.0   | 48.13 | 96.3  |      |       |       |      |       |       |
|                           |                      |       |       |  | 7     |       |      | 8     |       |      | 9     |       |
|                           |                      |       |       |  |       |       |      |       |       |      |       |       |

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## Initial and Continuing Calibration Verification Results

ICPMS-PE DRC-II

Method: 200.8

Analysis Name: ICPMS Tot. Rec. Metals

Sequence: 1508057

Work Order: C150802

Units: ug/L

| Total Recoverable Analyte | Initial (ICV1, ICV2) |       |       | Continuing Calibration Verification Standards (CCVs) |       |      |      |       |      |      |       |      |
|---------------------------|----------------------|-------|-------|--|-------|------|------|-------|------|------|-------|------|
|                           | True                 | Found | %R    | True   | Found | %R   | True | Found | %R   | True | Found | %R   |
| Thallium                  | 50.0                 | 48.88 | 97.8  |  | 1     |      |      | 2     |      |      | 3     |      |
|                           |                      |       |       | 50.0   | 48.98 | 98.0 | 50.0 | 47.58 | 95.2 | 50.0 | 48.24 | 96.5 |
|                           |                      |       |       |  | 4     |      |      | 5     |      |      | 6     |      |
|                           |                      |       |       | 50.0   | 47.12 | 94.2 |      |       |      |      |       |      |
|                           |                      |       |       |  | 7     |      |      | 8     |      |      | 9     |      |
|                           |                      |       |       |  |       |      |      |       |      |      |       |      |
| Vanadium                  | 50.0                 | 50.66 | 101.3 |  | 1     |      |      | 2     |      |      | 3     |      |
|                           |                      |       |       | 50.0   | 49.25 | 98.5 | 50.0 | 47.98 | 96.0 | 50.0 | 47.80 | 95.6 |
|                           |                      |       |       |  | 4     |      |      | 5     |      |      | 6     |      |
|                           |                      |       |       | 50.0   | 47.13 | 94.3 |      |       |      |      |       |      |
|                           |                      |       |       |  | 7     |      |      | 8     |      |      | 9     |      |
|                           |                      |       |       |  |       |      |      |       |      |      |       |      |

Metals - ICV &amp; CCV %R Criteria = 90 - 110%, Classical Chemistry %R Criteria -ICV = 90 - 110%R, CCV = 80 - 120%R.

TDF #: [none]

TechLaw, Inc. - ESAT Region 8  
ICP Interference Check Sample  
ICPMS-PE DRC-II

| <u>Analyte</u>    | <u>Check Sample</u>          | <u>Result*</u> | <u>Units</u> | <u>True</u> | <u>%R</u> | <u>PQL</u> |
|-------------------|------------------------------|----------------|--------------|-------------|-----------|------------|
| Sequence: 1508051 | Analysis: ICPMS Diss. Metals |                |              |             |           |            |
| Antimony          | IFA1                         | 0.0            | ug/L         |             |           | 1.00       |
|                   | IFB1                         | 0.0            | ug/L         |             |           | 1.00       |
| Arsenic           | IFA1                         | -0.1           | ug/L         |             |           | 2.00       |
|                   | IFB1                         | 20.0           | ug/L         | 20          | 100       | 2.00       |
| Barium            | IFA1                         | 0.0            | ug/L         |             |           | 10.0       |
|                   | IFB1                         | 0.2            | ug/L         |             |           | 10.0       |
| Cadmium           | IFA1                         | 0.0            | ug/L         |             |           | 0.200      |
|                   | IFB1                         | 20.4           | ug/L         | 20          | 102       | 0.200      |
| Chromium          | IFA1                         | 0.0            | ug/L         |             |           | 2.00       |
|                   | IFB1                         | 19.3           | ug/L         | 20          | 97        | 2.00       |
| Cobalt            | IFA1                         | 0.0            | ug/L         |             |           | 0.200      |
|                   | IFB1                         | 19.4           | ug/L         | 20          | 97        | 0.200      |
| Copper            | IFA1                         | 0.6            | ug/L         |             |           | 1.00       |
|                   | IFB1                         | 20.2           | ug/L         | 20          | 101       | 1.00       |
| Lead              | IFA1                         | 0.0            | ug/L         |             |           | 0.200      |
|                   | IFB1                         | 0.0            | ug/L         |             |           | 0.200      |
| Molybdenum        | IFA1                         | 198.1          | ug/L         | 200         | 99        | 1.00       |
|                   | IFB1                         | 203.5          | ug/L         | 200         | 102       | 1.00       |
| Nickel            | IFA1                         | -0.2           | ug/L         |             |           | 1.00       |
|                   | IFB1                         | 19.6           | ug/L         | 20          | 98        | 1.00       |
| Selenium          | IFA1                         | -0.4           | ug/L         |             |           | 2.00       |
|                   | IFB1                         | -0.5           | ug/L         |             |           | 2.00       |
| Silver            | IFA1                         | 0.0            | ug/L         |             |           | 1.00       |
|                   | IFB1                         | 19.4           | ug/L         | 20          | 97        | 1.00       |
| Thallium          | IFA1                         | -0.1           | ug/L         |             |           | 1.00       |
|                   | IFB1                         | -0.1           | ug/L         |             |           | 1.00       |
| Vanadium          | IFA1                         | -0.2           | ug/L         |             |           | 3.00       |
|                   | IFB1                         | -0.6           | ug/L         |             |           | 3.00       |

\*Criteria = 80-120%R of True Value or +/- PQL

See raw data for complete analyte list and results.

TDF #: [none]

TechLaw, Inc. - ESAT Region 8  
ICP Interference Check Sample  
ICPMS-PE DRC-II

| <u>Analyte</u>                                     | <u>Check Sample</u> | <u>Result*</u> | <u>Units</u> | <u>True</u> | <u>%R</u> | <u>PQL</u> |
|--|---------------------|----------------|--------------|-------------|-----------|------------|
| Sequence: 1508057 Analysis: ICPMS Tot. Rec. Metals |                     |                |              |             |           |            |
| Antimony   | IFA1                | 0.0            | ug/L         |             |           | 1.00       |
|  | IFB1                | 0.0            | ug/L         |             |           | 1.00       |
| Arsenic  | IFA1                | 0.1            | ug/L         |             |           | 2.00       |
|  | IFB1                | 20.3           | ug/L         | 20          | 102       | 2.00       |
| Barium   | IFA1                | 0.0            | ug/L         |             |           | 10.0       |
|  | IFB1                | 0.2            | ug/L         |             |           | 10.0       |
| Cadmium  | IFA1                | 0.1            | ug/L         |             |           | 0.200      |
|  | IFB1                | 20.2           | ug/L         | 20          | 101       | 0.200      |
| Chromium   | IFA1                | 0.1            | ug/L         |             |           | 2.00       |
|  | IFB1                | 20.2           | ug/L         | 20          | 101       | 2.00       |
| Cobalt   | IFA1                | 0.0            | ug/L         |             |           | 0.200      |
|  | IFB1                | 20.1           | ug/L         | 20          | 100       | 0.200      |
| Copper   | IFA1                | 0.6            | ug/L         |             |           | 1.00       |
|  | IFB1                | 20.8           | ug/L         | 20          | 104       | 1.00       |
| Lead   | IFA1                | 0.0            | ug/L         |             |           | 0.200      |
|  | IFB1                | 0.1            | ug/L         |             |           | 0.200      |
| Molybdenum   | IFA1                | 203.6          | ug/L         | 200         | 102       | 1.00       |
|  | IFB1                | 205.6          | ug/L         | 200         | 103       | 1.00       |
| Nickel   | IFA1                | -0.3           | ug/L         |             |           | 1.00       |
|  | IFB1                | 19.2           | ug/L         | 20          | 96        | 1.00       |
| Selenium   | IFA1                | -0.3           | ug/L         |             |           | 2.00       |
|  | IFB1                | -0.4           | ug/L         |             |           | 2.00       |
| Silver   | IFA1                | 0.0            | ug/L         |             |           | 1.00       |
|  | IFB1                | 19.7           | ug/L         | 20          | 99        | 1.00       |
| Thallium   | IFA1                | 0.0            | ug/L         |             |           | 1.00       |
|  | IFB1                | 0.0            | ug/L         |             |           | 1.00       |
| Vanadium   | IFA1                | 0.3            | ug/L         |             |           | 3.00       |
|  | IFB1                | -0.1           | ug/L         |             |           | 3.00       |

\*Criteria = 80-120%R of True Value or +/- PQL

See raw data for complete analyte list and results.



TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## ICP Interference Check Sample

## ICPOE - PE Optima

| <u>Analyte</u>    | <u>Check Sample</u>          | <u>Result*</u> | <u>Units</u> | <u>True</u> | <u>%R</u> | <u>PQL</u> |
|-------------------|------------------------------|----------------|--------------|-------------|-----------|------------|
| Sequence: 1508049 | Analysis: ICPOE Diss. Metals |                |              |             |           |            |
| Aluminum          | IFA1                         | 60,692.9       | ug/L         | 60,000      | 101       | 50.0       |
|                   | IFB1                         | 59,888.5       | ug/L         | 60,000      | 100       | 50.0       |
| Beryllium         | IFA1                         | -0.5           | ug/L         |             |           | 5.00       |
|                   | IFB1                         | 99.4           | ug/L         | 100         | 99        | 5.00       |
| Calcium           | IFA1                         | 289,975.8      | ug/L         | 300,000     | 97        | 250        |
|                   | IFB1                         | 288,132.4      | ug/L         | 300,000     | 96        | 250        |
| Iron              | IFA1                         | 236,081.1      | ug/L         | 250,000     | 94        | 250        |
|                   | IFB1                         | 234,753.8      | ug/L         | 250,000     | 94        | 250        |
| Magnesium         | IFA1                         | 143,118.4      | ug/L         | 150,000     | 95        | 250        |
|                   | IFB1                         | 141,998.2      | ug/L         | 150,000     | 95        | 250        |
| Manganese         | IFA1                         | 1.2            | ug/L         |             |           | 5.00       |
|                   | IFB1                         | 196.0          | ug/L         | 200         | 98        | 5.00       |
| Potassium         | IFA1                         | -306.8         | ug/L         |             |           | 1000       |
|                   | IFB1                         | 20,897.7       | ug/L         | 20,000      | 104       | 1000       |
| Sodium            | IFA1                         | 52,053.5       | ug/L         | 50,000      | 104       | 1000       |
|                   | IFB1                         | 51,132.6       | ug/L         | 50,000      | 102       | 1000       |
| Zinc              | IFA1                         | 1.2            | ug/L         |             |           | 20.0       |
|                   | IFB1                         | 287.9          | ug/L         | 300         | 96        | 20.0       |

\*Criteria = 80-120%R of True Value or +/- PQL

See raw data for complete analyte list and results.

TDF #: [none]

## TechLaw, Inc. - ESAT Region 8

## ICP Interference Check Sample

## ICPOE - PE Optima

| <u>Analyte</u>                                     | <u>Check Sample</u> | <u>Result*</u> | <u>Units</u> | <u>True</u> | <u>%R</u> | <u>PQL</u> |
|--|---------------------|----------------|--------------|-------------|-----------|------------|
| Sequence: 1508056 Analysis: ICPOE Tot. Rec. Metals |                     |                |              |             |           |            |
| Aluminum   | IFA1                | 60,462.8       | ug/L         | 60,000      | 101       | 50.0       |
|  | IFB1                | 59,581.8       | ug/L         | 60,000      | 99        | 50.0       |
| Beryllium  | IFA1                | -0.5           | ug/L         |             |           | 5.00       |
|  | IFB1                | 100.1          | ug/L         | 100         | 100       | 5.00       |
| Calcium  | IFA1                | 290,448.4      | ug/L         | 300,000     | 97        | 250        |
|  | IFB1                | 286,874.7      | ug/L         | 300,000     | 96        | 250        |
| Iron   | IFA1                | 236,531.9      | ug/L         | 250,000     | 95        | 250        |
|  | IFB1                | 234,587.7      | ug/L         | 250,000     | 94        | 250        |
| Magnesium  | IFA1                | 143,175.3      | ug/L         | 150,000     | 95        | 250        |
|  | IFB1                | 141,656.1      | ug/L         | 150,000     | 94        | 250        |
| Manganese  | IFA1                | 1.0            | ug/L         |             |           | 5.00       |
|  | IFB1                | 197.1          | ug/L         | 200         | 99        | 5.00       |
| Potassium  | IFA1                | -324.6         | ug/L         |             |           | 1000       |
|  | IFB1                | 20,624.6       | ug/L         | 20,000      | 103       | 1000       |
| Sodium   | IFA1                | 51,721.2       | ug/L         | 50,000      | 103       | 1000       |
|  | IFB1                | 50,847.3       | ug/L         | 50,000      | 102       | 1000       |
| Zinc   | IFA1                | 0.3            | ug/L         |             |           | 20.0       |
|  | IFB1                | 293.8          | ug/L         | 300         | 98        | 20.0       |

\*Criteria = 80-120%R of True Value or +/- PQL

See raw data for complete analyte list and results.

TDF #: [none]

| TechLaw, Inc. - ESAT Region 8<br>Detection Limit (PQL) Standard<br>ICPMS-PE DRC-II |       |       |     |       |
|--|-------|-------|-----|-------|
| Metals (Dissolved) by EPA 200/7000 Series Methods<br>Sequence: 1508051             |       |       |     |       |
| Analyte  | True  | Found | %R  | Units |
| Antimony   | 1.00  | 1.02  | 102 | ug/L  |
| Arsenic  | 2.00  | 2.29  | 114 | ug/L  |
| Barium   | 10.0  | 9.79  | 98  | ug/L  |
| Cadmium  | 0.200 | 0.119 | 60  | ug/L  |
| Chromium   | 2.00  | 1.67  | 84  | ug/L  |
| Cobalt   | 0.200 | 0.188 | 94  | ug/L  |
| Copper   | 1.00  | 0.942 | 94  | ug/L  |
| Lead   | 0.200 | 0.161 | 81  | ug/L  |
| Molybdenum   | 1.00  | 0.954 | 95  | ug/L  |
| Nickel   | 1.00  | 1.17  | 117 | ug/L  |
| Selenium   | 2.00  | 2.39  | 120 | ug/L  |
| Silver   | 1.00  | 0.978 | 98  | ug/L  |
| Thallium   | 1.00  | 0.882 | 88  | ug/L  |
| Vanadium   | 2.00  | 1.76  | 88  | ug/L  |

Recovery Control Limits: 70-130% except Pb, Tl, Sb, &amp; Hg at 50-150%. No limits for Al, Ca, Fe, K, Mg &amp; Na.

TDF #: [none]

| TechLaw, Inc. - ESAT Region 8<br>Detection Limit (PQL) Standard<br>ICPOE - PE Optima |      |       |     |       |
|--|------|-------|-----|-------|
| Metals (Dissolved) by EPA 200/7000 Series Methods                                    |      |       |     |       |
| Sequence: 1508049  |      |       |     |       |
| Analyte  | True | Found | %R  | Units |
| Aluminum   | 100  | 98.62 | 99  | ug/L  |
| Beryllium  | 5.00 | 5.060 | 101 | ug/L  |
| Calcium  | 250  | 251.6 | 101 | ug/L  |
| Iron   | 100  | 94.73 | 95  | ug/L  |
| Magnesium  | 1000 | 1030  | 103 | ug/L  |
| Manganese  | 10.0 | 10.47 | 105 | ug/L  |
| Potassium  | 1000 | 1044  | 104 | ug/L  |
| Sodium   | 1000 | 1031  | 103 | ug/L  |
| Zinc   | 50.0 | 53.16 | 106 | ug/L  |

Recovery Control Limits: 70-130% except Pb, Tl, Sb, &amp; Hg at 50-150%. No limits for Al, Ca, Fe, K, Mg &amp; Na.

TDF #: [none]

| TechLaw, Inc. - ESAT Region 8<br>Detection Limit (PQL) Standard<br>ICPMS-PE DRC-II |       |        |     |       |
|--|-------|--------|-----|-------|
| Metals (Total Recov) by EPA 200/7000 Series Methods                                |       |        |     |       |
| Sequence: 1508057  |       |        |     |       |
| Analyte  | True  | Found  | %R  | Units |
| Antimony   | 1.00  | 1.057  | 106 | ug/L  |
| Arsenic  | 2.00  | 1.918  | 96  | ug/L  |
| Barium   | 10.0  | 9.494  | 95  | ug/L  |
| Cadmium  | 0.200 | 0.1921 | 96  | ug/L  |
| Chromium   | 2.00  | 1.682  | 84  | ug/L  |
| Cobalt   | 0.200 | 0.1965 | 98  | ug/L  |
| Copper   | 1.00  | 1.027  | 103 | ug/L  |
| Lead   | 0.200 | 0.2049 | 102 | ug/L  |
| Molybdenum   | 1.00  | 1.025  | 102 | ug/L  |
| Nickel   | 1.00  | 0.9616 | 96  | ug/L  |
| Selenium   | 2.00  | 2.079  | 104 | ug/L  |
| Silver   | 1.00  | 0.9362 | 94  | ug/L  |
| Thallium   | 1.00  | 0.9511 | 95  | ug/L  |
| Vanadium   | 2.00  | 1.981  | 99  | ug/L  |

Recovery Control Limits: 70-130% except Pb, Tl, Sb, &amp; Hg at 50-150%. No limits for Al, Ca, Fe, K, Mg &amp; Na.

TDF #: [none]

| TechLaw, Inc. - ESAT Region 8<br>Detection Limit (PQL) Standard<br>ICPOE - PE Optima |      |       |     |       |
|--|------|-------|-----|-------|
| Metals (Total Recov) by EPA 200/7000 Series Methods                                  |      |       |     |       |
| Sequence: 1508056  |      |       |     |       |
| Analyte  | True | Found | %R  | Units |
| Aluminum   | 100  | 110.5 | 111 | ug/L  |
| Beryllium  | 5.00 | 5.101 | 102 | ug/L  |
| Calcium  | 250  | 249.2 | 100 | ug/L  |
| Iron   | 100  | 85.92 | 86  | ug/L  |
| Magnesium  | 1000 | 1013  | 101 | ug/L  |
| Manganese  | 10.0 | 10.40 | 104 | ug/L  |
| Potassium  | 1000 | 1063  | 106 | ug/L  |
| Sodium   | 1000 | 1021  | 102 | ug/L  |
| Zinc   | 50.0 | 52.73 | 105 | ug/L  |

Recovery Control Limits: 70-130% except Pb, Tl, Sb, &amp; Hg at 50-150%. No limits for Al, Ca, Fe, K, Mg &amp; Na.

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 310.1

Total

Sequence ID#: 1508048

Instrument ID #: Mettler AT

Water

LSR #:

| Analysis ID  | Sample Name       | Analysis Date | Analysis Time |
|--------------|-------------------|---------------|---------------|
| 1508047-SRM1 | Reference         | 08/10/15      | 02:36         |
| 1508047-BLK1 | Blank             | 08/10/15      | 02:36         |
| C150802-66   | GKMSW12-080915    | 08/10/15      | 02:36         |
| 1508047-DUP1 | Duplicate         | 08/10/15      | 02:36         |
| C150802-27   | GKMSW01-080915    | 08/10/15      | 02:36         |
| C150802-33   | GKMSW02-080915    | 08/10/15      | 02:36         |
| C150802-39   | GKMSW03-080915    | 08/10/15      | 02:36         |
| C150802-45   | GKMSW04-080915    | 08/10/15      | 02:36         |
| C150802-51   | GKMSW05-080915    | 08/10/15      | 02:36         |
| C150802-63   | GKMSW08-080915    | 08/10/15      | 02:36         |
| 1508048-CCV1 | Calibration Check | 08/10/15      | 02:36         |
| 1508048-CCB1 | Calibration Blank | 08/10/15      | 02:36         |

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 200.7

Dissolved

Sequence ID#: 1508049

Instrument ID #: ICPOE - PE Optima

Water

LSR #:

| Analysis ID  | Sample Name           | Analysis Date | Analysis Time |
|--------------|-----------------------|---------------|---------------|
| 1508049-ICV1 | Initial Cal Check     | 08/10/15      | 00:51         |
| 1508049-SCV1 | Secondary Cal Check   | 08/10/15      | 00:55         |
| 1508049-ICB1 | Initial Cal Blank     | 08/10/15      | 00:58         |
| 1508049-CRL1 | Instrument RL Check   | 08/10/15      | 01:01         |
| 1508049-IFA1 | Interference Check A  | 08/10/15      | 01:04         |
| 1508049-IFB1 | Interference Check B  | 08/10/15      | 01:07         |
| 1508038-BLK1 | Blank                 | 08/10/15      | 01:12         |
| 1508038-BS1  | Blank Spike           | 08/10/15      | 01:15         |
| C150802-23   | GKMSW01-080815        | 08/10/15      | 01:18         |
| 1508038-DUP1 | Duplicate             | 08/10/15      | 01:21         |
| 1508049-SRD1 | Serial Dilution       | 08/10/15      | 01:24         |
| 1508038-MS1  | Matrix Spike          | 08/10/15      | 01:27         |
| C150802-26   | GKMSW01-080915        | 08/10/15      | 01:30         |
| 1508038-MS2  | Matrix Spike          | 08/10/15      | 01:34         |
| C150802-02   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 01:37         |
| C150802-05   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 01:40         |
| 1508049-CCV1 | Calibration Check     | 08/10/15      | 01:43         |
| 1508049-CCB1 | Calibration Blank     | 08/10/15      | 01:46         |
| C150802-08   | AMIMAS-ROTARY PARK-1C | 08/10/15      | 01:49         |
| C150802-11   | AMIMAS-ROTARY PARK-2C | 08/10/15      | 01:53         |
| C150802-14   | AMIMAS-ROTARY PARK-21 | 08/10/15      | 01:56         |
| C150802-17   | AMIMAS-ROTARY PARK-22 | 08/10/15      | 01:59         |
| C150802-20   | AMIMAS-ROTARY PARK-23 | 08/10/15      | 02:02         |
| C150802-29   | GKMSW02-080815        | 08/10/15      | 02:05         |
| C150802-32   | GKMSW02-080915        | 08/10/15      | 02:08         |
| C150802-35   | GKMSW03-080815        | 08/10/15      | 02:11         |
| C150802-38   | GKMSW03-080915        | 08/10/15      | 02:15         |
| 1508049-CCV2 | Calibration Check     | 08/10/15      | 02:21         |
| 1508049-CCB2 | Calibration Blank     | 08/10/15      | 02:24         |
| 1508041-BLK1 | Blank                 | 08/10/15      | 02:29         |
| 1508041-BS1  | Blank Spike           | 08/10/15      | 02:32         |
| C150802-41   | GKMSW04-080815        | 08/10/15      | 02:35         |
| 1508041-DUP1 | Duplicate             | 08/10/15      | 02:38         |
| 1508049-SRD2 | Serial Dilution       | 08/10/15      | 02:42         |
| 1508041-MS1  | Matrix Spike          | 08/10/15      | 02:45         |
| C150802-44   | GKMSW04-080915        | 08/10/15      | 02:48         |
| C150802-47   | GKMSW05-080815        | 08/10/15      | 02:51         |
| C150802-50   | GKMSW05-080915        | 08/10/15      | 02:54         |



TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 200.7

Dissolved

Sequence ID#: 1508049

Instrument ID #: ICPOE - PE Optima

Water

LSR #:

| Analysis ID  | Sample Name       | Analysis Date | Analysis Time |
|--------------|-------------------|---------------|---------------|
| 1508049-CCV3 | Calibration Check | 08/10/15      | 03:00         |
| 1508049-CCB3 | Calibration Blank | 08/10/15      | 03:04         |
| C150802-53   | GKMSW06-080815    | 08/10/15      | 03:07         |
| C150802-56   | GKMSW07-080815    | 08/10/15      | 03:10         |
| C150802-59   | GKMSW08-080815    | 08/10/15      | 03:13         |
| C150802-62   | GKMSW08-080915    | 08/10/15      | 03:16         |
| C150802-65   | GKMSW12-080915    | 08/10/15      | 03:19         |
| C150802-68   | GKMTB01-080815    | 08/10/15      | 03:22         |
| 1508049-CCV4 | Calibration Check | 08/10/15      | 03:28         |
| 1508049-CCB4 | Calibration Blank | 08/10/15      | 03:32         |

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 245.1

Total

Sequence ID#: 1508050

Instrument ID #: CVAA FIMS - PE

Water

LSR #:

| Analysis ID  | Sample Name           | Analysis Date | Analysis Time |
|--------------|-----------------------|---------------|---------------|
| 1508050-ICV1 | Initial Cal Check     | 08/10/15      | 06:17         |
| 1508050-ICB1 | Initial Cal Blank     | 08/10/15      | 06:17         |
| 1508050-SCV1 | Secondary Cal Check   | 08/10/15      | 06:17         |
| 1508050-IBL1 | Instrument Blank      | 08/10/15      | 06:17         |
| 1508045-BS1  | Blank Spike           | 08/10/15      | 06:17         |
| 1508045-BLK1 | Blank                 | 08/10/15      | 06:17         |
| 1508045-DUP1 | Duplicate             | 08/10/15      | 06:17         |
| C150802-01   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 06:17         |
| 1508045-MS1  | Matrix Spike          | 08/10/15      | 06:17         |
| C150802-04   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 06:17         |
| C150802-07   | AMIMAS-ROTARY PARK-1C | 08/10/15      | 06:17         |
| C150802-10   | AMIMAS-ROTARY PARK-2C | 08/10/15      | 06:17         |
| C150802-13   | AMIMAS-ROTARY PARK-21 | 08/10/15      | 06:17         |
| C150802-16   | AMIMAS-ROTARY PARK-22 | 08/10/15      | 06:17         |
| 1508050-CCV1 | Calibration Check     | 08/10/15      | 06:17         |
| 1508050-CCB1 | Calibration Blank     | 08/10/15      | 06:17         |
| C150802-19   | AMIMAS-ROTARY PARK-23 | 08/10/15      | 06:17         |
| C150802-22   | GKMSW01-080815        | 08/10/15      | 06:17         |
| C150802-25   | GKMSW01-080915        | 08/10/15      | 06:17         |
| C150802-28   | GKMSW02-080815        | 08/10/15      | 06:17         |
| C150802-31   | GKMSW02-080915        | 08/10/15      | 06:17         |
| 1508045-MS2  | Matrix Spike          | 08/10/15      | 06:17         |
| C150802-34   | GKMSW03-080815        | 08/10/15      | 06:17         |
| C150802-37   | GKMSW03-080915        | 08/10/15      | 06:17         |
| C150802-40   | GKMSW04-080815        | 08/10/15      | 06:17         |
| C150802-43   | GKMSW04-080915        | 08/10/15      | 06:17         |
| 1508050-CCV2 | Calibration Check     | 08/10/15      | 06:17         |
| 1508050-CCB2 | Calibration Blank     | 08/10/15      | 06:17         |
| C150802-46   | GKMSW05-080815        | 08/10/15      | 06:17         |
| C150802-49   | GKMSW05-080915        | 08/10/15      | 06:17         |
| C150802-52   | GKMSW06-080815        | 08/10/15      | 06:17         |
| C150802-55   | GKMSW07-080815        | 08/10/15      | 06:17         |
| C150802-58   | GKMSW08-080815        | 08/10/15      | 06:17         |
| C150802-61   | GKMSW08-080915        | 08/10/15      | 06:17         |
| 1508045-BS2  | Blank Spike           | 08/10/15      | 06:17         |
| 1508045-BLK2 | Blank                 | 08/10/15      | 06:17         |
| 1508045-DUP2 | Duplicate             | 08/10/15      | 06:17         |
| 1508045-MS3  | Matrix Spike          | 08/10/15      | 06:17         |

Project Name: Upper Animas\_Surface Water 2\_AUG 2015\_A096

Certificate of Analysis

TDF #: [none]

TechLaw Inc, ESAT Region8

**INSTRUMENT ANALYSIS SEQUENCE LOG**

Analytical Method: 245.1

Total

Sequence ID#: 1508050

Instrument ID #: CVAA FIMS - PE

Water

LSR #:

| Analysis ID  | Sample Name       | Analysis Date | Analysis Time |
|--------------|-------------------|---------------|---------------|
| 1508050-CCV3 | Calibration Check | 08/10/15      | 06:17         |
| 1508050-CCB3 | Calibration Blank | 08/10/15      | 06:17         |
| C150802-64   | GKMSW12-080915    | 08/10/15      | 06:17         |
| C150802-67   | GKMTB01-080815    | 08/10/15      | 06:17         |
| 1508050-CCV4 | Calibration Check | 08/10/15      | 06:17         |
| 1508050-CCB4 | Calibration Blank | 08/10/15      | 06:17         |

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 200.8

Dissolved

Sequence ID#: 1508051

Instrument ID #: ICPMS-PE DRC-II

Water

LSR #:

| Analysis ID  | Sample Name           | Analysis Date | Analysis Time |
|--------------|-----------------------|---------------|---------------|
| 1508051-ICV1 | Initial Cal Check     | 08/10/15      | 01:12         |
| 1508051-SCV1 | Secondary Cal Check   | 08/10/15      | 01:15         |
| 1508051-ICB1 | Initial Cal Blank     | 08/10/15      | 01:19         |
| 1508051-CRL1 | Instrument RL Check   | 08/10/15      | 01:22         |
| 1508051-IFA1 | Interference Check A  | 08/10/15      | 01:25         |
| 1508051-IFB1 | Interference Check B  | 08/10/15      | 01:29         |
| 1508039-BLK1 | Blank                 | 08/10/15      | 01:32         |
| 1508039-BS1  | Blank Spike           | 08/10/15      | 01:35         |
| C150802-23   | GKMSW01-080815        | 08/10/15      | 01:38         |
| 1508039-DUP1 | Duplicate             | 08/10/15      | 01:41         |
| 1508051-SRD1 | Serial Dilution       | 08/10/15      | 01:44         |
| 1508039-MS1  | Matrix Spike          | 08/10/15      | 01:47         |
| C150802-26   | GKMSW01-080915        | 08/10/15      | 01:50         |
| 1508039-MS2  | Matrix Spike          | 08/10/15      | 01:54         |
| C150802-02   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 01:57         |
| C150802-05   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 02:00         |
| 1508051-CCV1 | Calibration Check     | 08/10/15      | 02:03         |
| 1508051-CCB1 | Calibration Blank     | 08/10/15      | 02:06         |
| C150802-08   | AMIMAS-ROTARY PARK-1C | 08/10/15      | 02:09         |
| C150802-11   | AMIMAS-ROTARY PARK-2C | 08/10/15      | 02:13         |
| C150802-14   | AMIMAS-ROTARY PARK-21 | 08/10/15      | 02:16         |
| C150802-17   | AMIMAS-ROTARY PARK-22 | 08/10/15      | 02:19         |
| C150802-20   | AMIMAS-ROTARY PARK-23 | 08/10/15      | 02:22         |
| C150802-29   | GKMSW02-080815        | 08/10/15      | 02:25         |
| C150802-32   | GKMSW02-080915        | 08/10/15      | 02:28         |
| C150802-35   | GKMSW03-080815        | 08/10/15      | 02:31         |
| C150802-38   | GKMSW03-080915        | 08/10/15      | 02:34         |
| 1508051-CCV2 | Calibration Check     | 08/10/15      | 02:40         |
| 1508051-CCB2 | Calibration Blank     | 08/10/15      | 02:44         |
| 1508042-BLK1 | Blank                 | 08/10/15      | 02:49         |
| 1508042-BS1  | Blank Spike           | 08/10/15      | 02:52         |
| C150802-41   | GKMSW04-080815        | 08/10/15      | 02:55         |
| 1508042-DUP1 | Duplicate             | 08/10/15      | 02:58         |
| 1508051-SRD2 | Serial Dilution       | 08/10/15      | 03:01         |
| 1508042-MS1  | Matrix Spike          | 08/10/15      | 03:04         |
| C150802-44   | GKMSW04-080915        | 08/10/15      | 03:07         |
| C150802-47   | GKMSW05-080815        | 08/10/15      | 03:10         |
| C150802-50   | GKMSW05-080915        | 08/10/15      | 03:13         |

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 200.8

Dissolved

Sequence ID#: 1508051

Instrument ID #: ICPMS-PE DRC-II

Water

LSR #:

| Analysis ID  | Sample Name       | Analysis Date | Analysis Time |
|--------------|-------------------|---------------|---------------|
| 1508051-CCV3 | Calibration Check | 08/10/15      | 03:20         |
| 1508051-CCB3 | Calibration Blank | 08/10/15      | 03:23         |
| C150802-53   | GKMSW06-080815    | 08/10/15      | 03:26         |
| C150802-56   | GKMSW07-080815    | 08/10/15      | 03:29         |
| C150802-59   | GKMSW08-080815    | 08/10/15      | 03:32         |
| C150802-62   | GKMSW08-080915    | 08/10/15      | 03:36         |
| C150802-65   | GKMSW12-080915    | 08/10/15      | 03:39         |
| C150802-68   | GKMTB01-080815    | 08/10/15      | 03:42         |
| 1508051-CCV4 | Calibration Check | 08/10/15      | 03:48         |
| 1508051-CCB4 | Calibration Blank | 08/10/15      | 03:51         |

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 150.1

WET

Sequence ID#: 1508053

Instrument ID #: pH Meter

Water

LSR #:

| Analysis ID | Sample Name           | Analysis Date | Analysis Time |
|-------------|-----------------------|---------------|---------------|
| C150802-03  | AMIMAS-ROTARY PARK-0C | 08/10/15      | 04:16         |
| C150802-06  | AMIMAS-ROTARY PARK-0C | 08/10/15      | 04:16         |
| C150802-09  | AMIMAS-ROTARY PARK-1C | 08/10/15      | 04:16         |
| C150802-12  | AMIMAS-ROTARY PARK-2C | 08/10/15      | 04:16         |
| C150802-15  | AMIMAS-ROTARY PARK-21 | 08/10/15      | 04:16         |
| C150802-18  | AMIMAS-ROTARY PARK-22 | 08/10/15      | 04:16         |
| C150802-21  | AMIMAS-ROTARY PARK-23 | 08/10/15      | 04:16         |

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 200.7

Total Recoverable

Sequence ID#: 1508056

Instrument ID #: ICPOE - PE Optima

Water

LSR #:

| Analysis ID  | Sample Name           | Analysis Date | Analysis Time |
|--------------|-----------------------|---------------|---------------|
| 1508056-ICV1 | Initial Cal Check     | 08/10/15      | 06:06         |
| 1508056-SCV1 | Secondary Cal Check   | 08/10/15      | 06:10         |
| 1508056-ICB1 | Initial Cal Blank     | 08/10/15      | 06:13         |
| 1508056-CRL1 | Instrument RL Check   | 08/10/15      | 06:16         |
| 1508056-IFA1 | Interference Check A  | 08/10/15      | 06:19         |
| 1508056-IFB1 | Interference Check B  | 08/10/15      | 06:23         |
| 1508043-BLK1 | Blank                 | 08/10/15      | 06:27         |
| 1508043-SRM1 | Reference             | 08/10/15      | 06:30         |
| C150802-22   | GKMSW01-080815        | 08/10/15      | 06:33         |
| 1508043-DUP1 | Duplicate             | 08/10/15      | 06:36         |
| 1508056-SRD1 | Serial Dilution       | 08/10/15      | 06:39         |
| 1508043-MS1  | Matrix Spike          | 08/10/15      | 06:43         |
| C150802-25   | GKMSW01-080915        | 08/10/15      | 06:46         |
| 1508043-MS3  | Matrix Spike          | 08/10/15      | 06:49         |
| C150802-01   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 06:52         |
| 1508056-CCV1 | Calibration Check     | 08/10/15      | 06:58         |
| 1508056-CCB1 | Calibration Blank     | 08/10/15      | 07:01         |
| C150802-04   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 07:04         |
| C150802-07   | AMIMAS-ROTARY PARK-1C | 08/10/15      | 07:07         |
| C150802-10   | AMIMAS-ROTARY PARK-2C | 08/10/15      | 07:10         |
| C150802-13   | AMIMAS-ROTARY PARK-21 | 08/10/15      | 07:14         |
| C150802-16   | AMIMAS-ROTARY PARK-22 | 08/10/15      | 07:17         |
| C150802-19   | AMIMAS-ROTARY PARK-23 | 08/10/15      | 07:20         |
| C150802-28   | GKMSW02-080815        | 08/10/15      | 07:23         |
| C150802-31   | GKMSW02-080915        | 08/10/15      | 07:26         |
| C150802-34   | GKMSW03-080815        | 08/10/15      | 07:29         |
| C150802-37   | GKMSW03-080915        | 08/10/15      | 07:33         |
| 1508056-CCV2 | Calibration Check     | 08/10/15      | 07:36         |
| 1508056-CCB2 | Calibration Blank     | 08/10/15      | 07:39         |
| 1508046-BLK1 | Blank                 | 08/10/15      | 07:44         |
| 1508046-SRM1 | Reference             | 08/10/15      | 07:47         |
| C150802-40   | GKMSW04-080815        | 08/10/15      | 07:50         |
| 1508046-DUP1 | Duplicate             | 08/10/15      | 07:53         |
| 1508056-SRD2 | Serial Dilution       | 08/10/15      | 07:57         |
| 1508046-MS1  | Matrix Spike          | 08/10/15      | 08:00         |
| C150802-43   | GKMSW04-080915        | 08/10/15      | 08:03         |
| C150802-46   | GKMSW05-080815        | 08/10/15      | 08:06         |
| C150802-49   | GKMSW05-080915        | 08/10/15      | 08:09         |

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 200.7

Total Recoverable

Sequence ID#: 1508056

Instrument ID #: ICPOE - PE Optima

Water

LSR #:

| Analysis ID  | Sample Name       | Analysis Date | Analysis Time |
|--------------|-------------------|---------------|---------------|
| 1508056-CCV3 | Calibration Check | 08/10/15      | 08:15         |
| 1508056-CCB3 | Calibration Blank | 08/10/15      | 08:19         |
| C150802-52   | GKMSW06-080815    | 08/10/15      | 08:22         |
| C150802-55   | GKMSW07-080815    | 08/10/15      | 08:25         |
| C150802-58   | GKMSW08-080815    | 08/10/15      | 08:28         |
| C150802-61   | GKMSW08-080915    | 08/10/15      | 08:31         |
| C150802-64   | GKMSW12-080915    | 08/10/15      | 08:34         |
| C150802-67   | GKMTB01-080815    | 08/10/15      | 08:37         |
| 1508056-CCV4 | Calibration Check | 08/10/15      | 08:44         |
| 1508056-CCB4 | Calibration Blank | 08/10/15      | 08:47         |



TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 200.8

Total Recoverable

Sequence ID#: 1508057

Instrument ID #: ICPMS-PE DRC-II

Water

LSR #:

| Analysis ID  | Sample Name           | Analysis Date | Analysis Time |
|--------------|-----------------------|---------------|---------------|
| 1508057-ICV1 | Initial Cal Check     | 08/10/15      | 07:45         |
| 1508057-SCV1 | Secondary Cal Check   | 08/10/15      | 07:48         |
| 1508057-ICB1 | Initial Cal Blank     | 08/10/15      | 07:51         |
| 1508057-CRL1 | Instrument RL Check   | 08/10/15      | 07:55         |
| 1508057-IFA1 | Interference Check A  | 08/10/15      | 07:58         |
| 1508057-IFB1 | Interference Check B  | 08/10/15      | 08:01         |
| 1508043-BLK2 | Blank                 | 08/10/15      | 08:05         |
| C150802-22   | GKMSW01-080815        | 08/10/15      | 08:08         |
| 1508043-DUP2 | Duplicate             | 08/10/15      | 08:11         |
| 1508057-SRD1 | Serial Dilution       | 08/10/15      | 08:14         |
| 1508043-SRM2 | Reference             | 08/10/15      | 08:17         |
| 1508043-MS2  | Matrix Spike          | 08/10/15      | 08:20         |
| C150802-25   | GKMSW01-080915        | 08/10/15      | 08:23         |
| 1508043-MS4  | Matrix Spike          | 08/10/15      | 08:26         |
| C150802-01   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 08:29         |
| 1508057-CCV1 | Calibration Check     | 08/10/15      | 08:35         |
| 1508057-CCB1 | Calibration Blank     | 08/10/15      | 08:39         |
| C150802-04   | AMIMAS-ROTARY PARK-0C | 08/10/15      | 08:42         |
| C150802-07   | AMIMAS-ROTARY PARK-1C | 08/10/15      | 08:45         |
| C150802-10   | AMIMAS-ROTARY PARK-2C | 08/10/15      | 08:48         |
| C150802-13   | AMIMAS-ROTARY PARK-21 | 08/10/15      | 08:51         |
| C150802-16   | AMIMAS-ROTARY PARK-22 | 08/10/15      | 08:54         |
| C150802-19   | AMIMAS-ROTARY PARK-23 | 08/10/15      | 08:57         |
| C150802-28   | GKMSW02-080815        | 08/10/15      | 09:01         |
| C150802-31   | GKMSW02-080915        | 08/10/15      | 09:04         |
| C150802-34   | GKMSW03-080815        | 08/10/15      | 09:07         |
| C150802-37   | GKMSW03-080915        | 08/10/15      | 09:10         |
| 1508057-CCV2 | Calibration Check     | 08/10/15      | 09:13         |
| 1508057-CCB2 | Calibration Blank     | 08/10/15      | 09:16         |
| 1508046-BLK2 | Blank                 | 08/10/15      | 09:21         |
| C150802-40   | GKMSW04-080815        | 08/10/15      | 09:24         |
| 1508046-DUP2 | Duplicate             | 08/10/15      | 09:27         |
| 1508057-SRD2 | Serial Dilution       | 08/10/15      | 09:30         |
| 1508046-SRM2 | Reference             | 08/10/15      | 09:33         |
| 1508046-MS2  | Matrix Spike          | 08/10/15      | 09:36         |
| C150802-43   | GKMSW04-080915        | 08/10/15      | 09:39         |
| C150802-46   | GKMSW05-080815        | 08/10/15      | 09:42         |
| C150802-49   | GKMSW05-080915        | 08/10/15      | 09:45         |

TDF #: [none]

## TechLaw Inc, ESAT Region 8

## INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: 200.8

Total Recoverable

Sequence ID#: 1508057

Instrument ID #: ICPMS-PE DRC-II

Water

LSR #:

| Analysis ID  | Sample Name       | Analysis Date | Analysis Time |
|--------------|-------------------|---------------|---------------|
| 1508057-CCV3 | Calibration Check | 08/10/15      | 09:51         |
| 1508057-CCB3 | Calibration Blank | 08/10/15      | 09:55         |
| C150802-52   | GKMSW06-080815    | 08/10/15      | 09:58         |
| C150802-55   | GKMSW07-080815    | 08/10/15      | 10:01         |
| C150802-58   | GKMSW08-080815    | 08/10/15      | 10:04         |
| C150802-61   | GKMSW08-080915    | 08/10/15      | 10:07         |
| C150802-64   | GKMSW12-080915    | 08/10/15      | 10:10         |
| C150802-67   | GKMTB01-080815    | 08/10/15      | 10:14         |
| 1508057-CCV4 | Calibration Check | 08/10/15      | 10:20         |
| 1508057-CCB4 | Calibration Blank | 08/10/15      | 10:23         |